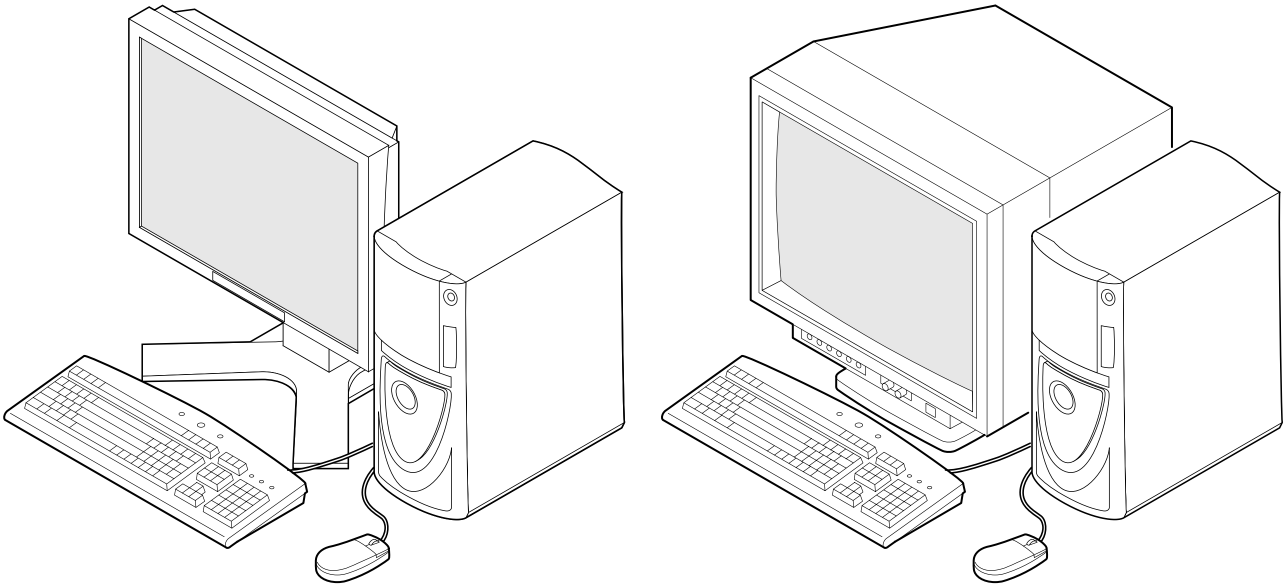
FUJI COMPUTED RADIOGRAPHY

FCR DMS QA-WS771

Service Manual



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Export Restrictions (TWA) Applying to the QA-WS

Export restrictions (TWA) apply to models in which Service Pack 4/ Internet Explorer 4 have been installed on the hard disk of the QA-WS controller main unit, such as models equipped with DELL Precision 410 - Pentium II of 400MHz or more, because the encryption key bit length of the Internet Explorer 4 program exceeds the limit.

For models to which export restrictions (TWA) apply, government approval obtained through due procedure is required in order to export or otherwise remove such models from Japan.

Note that the same restrictions apply not only to the main unit but also to after-sale parts, service manuals and service training (for exporting or transferring technology) when such items are dispatched or shipped to foreign countries and when service training is given for trainees from foreign countries.

This manual is intended to assist the service person in the safe and efficient servicing of the equipment described.
The equipment must be used in accordance with the procedures contained in this manual and must not be used for purposes other than those which are described herein.

The equipment should only be used by persons having recognized qualifications and if relevant having adequate training on this equipment, especially regarding protective measures such as laser radiation protection.

It is the responsibility of the user to ensure that existing legal regulations regarding installation of the building with respect to the equipment are observed. Moreover the legal regulations regarding the operation of the equipment are to be observed.

Incorrect operation, or failure of the user to maintain the equipment in accordance with the schedule of maintenance, relieves the manufacturer or his agent from all responsibility for consequent noncompliance, damage, injury, defects and/or other malfunction.

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Introduction

Support to Windows XP

This manual presents procedures specific to Windows XP Professional (hereinafter referred to as “XP”) described in separate “Installation of Windows XP Professional and Necessary Setups”. To use XP, see this separate addendum for details.

For the same procedures used by both Windows NT4.0 (hereinafter referred to as “NT”) and XP, such as installation of the application, necessary settings, and others, see relevant sections in this manual. When doing so, “NT” that appears in this manual must be read for “XP”.

Mentioning monitors in this manual

A CRT or LCD can be used as a monitor for the QA-WS771.

To mention a monitor in this Service Manual, “CRT” is used if it is not necessary to differentiate with each other between CRT and LCD. Therefore, when an LCD is used, read LCD for "CRT".

Furthermore, note that in this Service Manual, the sections shown below are described on the assumption that a CRT (Ikegami 1K landscape monitor) is used. If an LCD (SL-IC300 or SL-IC200) is used, see the references listed below.

- Maintenance
  “9. Installing the G400/G450 Video Board Driver”
  “10. Installing the SPECTRA Video Board Driver”
  “11. Installing the MGA Video Board Driver”
- Installation
  Seps (2) and (3) in “2.5 Connecting Cables”

☞ “Super Resolution LCD Monitor SL-IC300 Service Manual” or “LCD Monitor SL-IC200 Service Manual”

- Installation
  Step (2) in “5.2 Configuring the Hardware of This Equipment”

☞ “Appendix A - Setups Required for Connecting the SL-IC300 Monitor” under Maintenance or “Appendix D - Setup Necessary for Connection of SL-IC200 Monitor” under Appendices of this Service Manual.

Note on Service Manual

- ■ This manual contains confidential information on the internal structure of the product, etc.
  Handle with extreme precaution.
- ■ Due to the product development schedule, some specifications, options and variation configuration may differ from the contents of this manual at the time of its release. In such cases, information on unapplicable specifications and configurations shall be notified separately in the form of "Engineering Change Notice (ECN)".
- ■ Product names used in this manual:
  For the purpose of simplifying the description in this manual, “QA-WS” is used herein as the abbreviation of the product, instead of official product name “QA-WS771”.
  “QA-WS” also appears on screen displays.
  In addition, for “HI-C”, “HI-CX” or “HIC655” that appears on screen displays and in the description, read it as “QA-WS”.

Warning and Cautionary Information

Precautions during the service work are indicated by the following terms and symbols.

WARNING	Serious injuries or death may result if this precaution is not observed. Damage of the unit and customer database may also occur.
CAUTION	Mild or moderate injuries may result if this precaution is not observed. Serious malfunction (which may be unrepairable or difficult to repair) may also occur.
IMPORTANT	Abnormal operations (easy to repair) may result if this precaution is not observed.
NOTE	Indicates items which require particular attention.
REFERENCE	Explanation of related items and terms.

Precautionary Labels

To prevent danger to humans and serious accidents, observe the following.

The unit is also pasted with precautionary labels.

Follow these instructions on these labels when carrying out work.

⚠ *WARNING*

Unless indicated otherwise, be sure to turn OFF the power switch before maintenance work, and disconnect the power plug from the outlet.

Even if the power switch is OFF, AC100 to 240V (differs according to machine specifications) will still be supplied to the primary input terminal of the unit if the power cable is connected, and this may result in possible electric hazards.

⚠ *WARNING*

As neckties, scarves, and necklaces may get caught in the unit during work, remove these items or take precautions against such accidents.

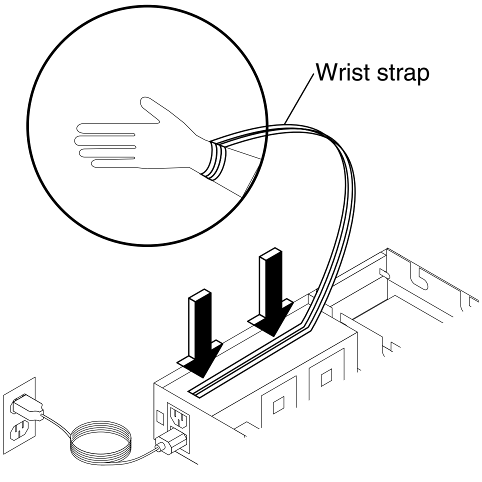
⚠ *WARNING*

Never modify the unit unless specified otherwise.

Modification of the safety unit (interlock, breaker, temperature fuse, etc.) constitutes a serious problems as it is not only dangerous but violates the related laws and regulations.

◆ NOTE ◆

To avoid damages to the parts/units due to static discharge, use a wrist strap putting one end on your wrist and the other on the grounded section of the equipment, as illustrated below.



Safety Precautions

■ Safety Precautions (Control Unit)

Follow the precautions below when installing, using, and servicing the control unit (PC).
Refer to the User's Guide provided for details on the control unit.

Input voltage .... 90 − 265VAC

Electric hazard prevention .... The power cord of the control unit and CRT monitor uses a 3-pin plug.
Connect it to a properly grounded power outlet.
When using an extension cord, use a 3-line type with a grounding pin.

Place of installation .... Avoid places where dust and foreign particles may enter inside through the computer opening.
Avoid installing near heaters and heat sources.

Precautions when working on internal parts of the control unit;

(1) Turn OFF the power of the PC, CRT, and other peripheral devices.
(2) Disconnect the power cord from the outlet to prevent electric hazard.
(3) Open the I/O panel on the rear of the PC, touch the metallic part to fully discharge body static electricity before accessing.
(4) When removing the board and memory module, etc., hold them without directly touching the connectors and pins and place them in a static electricity prevention package.

■ Safety Precautions (21" CRT monitor)

⚠ ***WARNING***

High voltage is used inside the CRT monitor.

To prevent electric hazards and danger, the CRT internal parts cannot be accessed.
(The CRT monitor does not consist of parts servicable by the service engineer.)

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FCR DMS

QA-WS771 Service Manual

MAINTENANCE

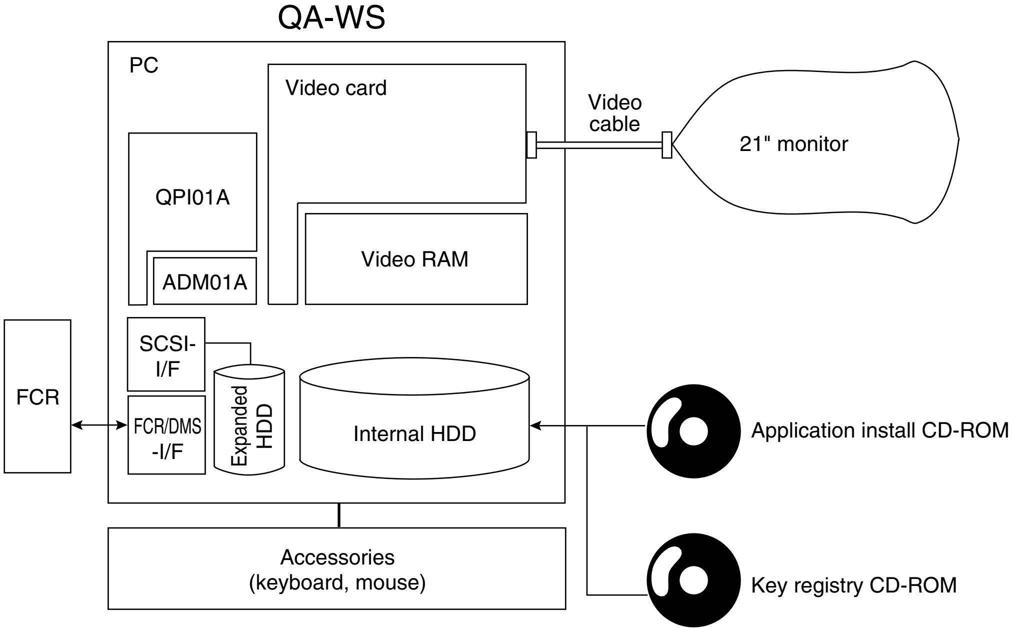
Control Sheet

Date of issue	Revision No.	Reason	Applicable pages
2/10/1999	00	New release (FM2420)	All pages
5/20/1999	01	Corrections and additions (Print Service Function) for 2nd edition (FM2448)	00, 0.1, 0.2, 1, 4, 20-164
1/10/2000	02	Additions for software upgrade to ver. A02 (FM2701)	0, 00, 0.2, 0.3, 0.4, 164-184
1/10/2000	02	Error codes added (FM2701)	Error Codes 1-52
12/20/2000	03	Corrections and additions for software upgrade to ver. A03, A04 and Precision 420, together with other corrections (FM2908)	0, 00, 0.1-0.3, 1, 2, 7, 9, 37-40, 42, 45, 51, 57, 68, 69, 70-75, 76, 77-81, 91, 97, 98, 100, 101, 106, 107, 109, 113-118, 121, 123, 126, 127, 129-134, 137, 138, 140, 141, 144, 146, 149, 150, 152, 175, 181, 194-250
12/20/2000	03	Changes in pagination (FM2908)	43, 58, 59, 82-90, 92-96, 99, 102-105, 108, 110-112, 119-120, 122, 124, 125, 128, 135, 136, 139, 142, 143, 145, 147, 148, 151, 153-174, 176-180, 182-193
7/10/2001	04	Corrections and additions for software upgrade to ver. A05 and Precision 330, together with other corrections (FM3067)	0, 00, 6-10, 41-73, 219, 248, 252, 255-283, 284-304
7/10/2001	04	Changes in pagination (FM3067)	11-40, 74-218, 220-247, 249-251, 253, 254
1/20/2002	05	Corrections and additions due to adoption of Precision 530, together with other corrections (FM3270)	0, 00, 1, 2, 4, 7, 8, 11, 12, 37, 42-66, 97, 116, 241, 281
1/20/2002	05	Changes in pagination (FM3270)	9, 10, 13-36, 38-41, 67-96, 98-115, 117-240, 242-280, 282-290
9/10/2002	06	Revision for software version A06 and SL-IC300 (FM3446)	0, 00, 40, 41, 60, 61, 67, 71, 103, 291-306, Appendix A1-A6
12/20/2002	07	Revision for software version A07 and Windows XP (FM3623)	0, 00, 2, 37, 40-42, 181, 307-314
06/20/2003	08	Corrections and additions due to adoption of Precision 450 and SL-IC200 (FM3987)	0, 00, 1, 2, 5, 7-12.4, 40, 41
11/20/2003	09	Corrections (FM4117)	0, 00, 51.1, 51.2, 52, 216, 241, 269.1, 269.2

1. Outline of Unit

1.1 System Configuration

■ QA-WS Configuration


QA-WS
PC
Video card
Video cable
21" monitor
QPI01A
Video RAM
ADM01A
SCSI-I/F
FCR
FCR/DMS-I/F
Expanded HDD
Internal HDD
Application install CD-ROM
Accessories (keyboard, mouse)
Key registry CD-ROM

■ Basic Configuration

Component	Details
PC (DOS/V-PC)*	DELL Workstation Precision 410 / 420 /330 / 530 / 450
21" monitor	1600H × 1200V Landscape-type (MDM 2130)
Application software	Software for realizing functions of QA-WS

* PC models are subject to change.

■ Options

Component	Details
21" monitor	1600H × 1200V Landscape-type One unit can be added.
Image processing board QPI01A	Boards with image compression, expansion, magnification, reduction, reversal, rotation, DR compression, one dimensional USM, tonal conversion, spatial processing functions Image memory: 32MW (standard) Expandable up to 96MW High density images require 96MW (expand 64MW)
FCR/DMS interface boards PEI01A board on PCI bus, and DXA01A on ISA bus	Board which enables connection with image reader via FCR/DMS interface. Up to two PEI01A boards can be mounted.
External recording unit*	Additional SCSI-HDD can be installed. (The SCSI board needs to be connected for SCSI connections.)

1.2 Hardware

■ Control Unit (PC)

Item	Details*
CPU	Pentium II, above clock frequency of 400 MHz
System memory	256MB (standard density) / 384GB (high density)
Magnetic disk	9 GB / 36 GB
CD-ROM drive	×24 speed
Slots for expansion card	PCI bus slot: 5 (3 for Precision 530) ISA bus slot: 1 (Precision 410 Only)
Network	10BASE-T/100BASE-TX
Video card	Supports PCI interface. Supports 24-bit True Color at resolution of 1600H ×1200V.
OS	Windows-NT 4.0 or Windows XP Professional

* The above are subject to change.

■ 21" Monitor

Item	Details	Remarks
Luminance	300cd/m^2	More than double HI-C654 specifications.
Resolution	1600H × 1200V	1568H ×1152V for HI-C654
Refresh rate	Horizontal 93 KHz Vertical 75 Hz	68 Hz for HI-C654
AR coating	Yes	
Power supply voltage	90-265 VAC	
Type	21" Landscape	
CRT transmittance	Approx. 30%	

1.3 Outline of QA-WS Functions (Reference)

■ Confirming the Image Quality

Function	Details
Monitoring images	• Consecutively monitors images input from the Image Reader. • Classifies images for each Image Reader, X-ray chamber and radiologist for monitoring. • Categorizes monitor display unit for each image, examination and patient. • Monitors images in the thumbnail image format or image information format. • Displays specified monitor images on a different window in the image size which allows confirmation of details. • Continuously displays two or more input images. • Confirms images categorized for each patient, radiographic examination and X-ray chamber on a multiple number of QA-WS systems installed in the radiography department, through management of the commonly available database, independent of the QA-WS system in which the image is actually stored.

■ Changing/Modifying Images

Function	Details
Changing the image information	• Changes the patient information that includes patient name, ID No., sex and date of birth. • Changes the examination information that includes examination No., study No. and series No. • Changes the exposure information that includes exposure region, exposure menu, date of exposure and film annotation.
Changing normalization conditions	• Subjects images received from the FCR5000/R or FCR5501 Image Reader to renormalization processing in the QA-WS system. • Images for renormalization are received through the I/F via network and DICOM-conformed FUJI protocol. • Subjects images to renormalization processing due to changes made in exposure menus. • Allows the user to interactively confirm images for renormalization processing. • Displays renormalized images for confirmation.
Changing image processing conditions	• Changes image processing parameters (gradation, frequency, DR compression, one-dimensional USM, Hyper-DR compression, Hyper-frequency and PEM processing). • Changes image processing according to modified exposure menus. • Allows the user to interactively confirm image processing. • Displays changed image processing for confirmation.
Changing the image orientation	• Changes the image orientation (right-and-left reversal and 180° or 90° rotation). • Displays images after orientation has been changed.
Changing the film output format	• Changes the format for image output on film (1, 2 or 4 images).
Changing the pixel density	• Converts pixel density from high density to standard density. • Uses the same pixel density conversion algorithm as that for the Image Reader (for reducing effect of the stationary grid during exposure).

■ Distributing Images

Function	Details
Changing the destination	• Changes the destination on the network. • Changes the destination E-I/F.
Changing order of distribution	• Retains image output by specifying it for an input image that is monitored on the display. • Changes order (top priority or the last) of output of specified images. • Re-outputs the image that has been retained to be output. • Cancels image output and deletes the image.
Changing image compression ratios	• Changes the image compression method or ratio used for image distribution. • Distributes images of different compression ratios depending of the destination. • Allows the following changes. - FUJI reversible compression × FUJI irreversible compression - FUJI reversible compression × JPEG reversible compression - FUJI irreversible compression × JPEG reversible compression
Changing the communication system	• Converts E-I/F protocol to network:FINP, DICOM protocol. • Converts network:FINP protocol to network DICOM protocol. • Uses 10BASE-T or 100BASE-TX for networks. If networks that the input and output sides support are different with each other, the 2nd network board is installed for making it possible to cope with such a difference.
Protocols supported for output via networks	• FINP • VERIFICATION SCU • DICOM:CR STORAGE SCU (including private tag) • DICOM:BASIC GRAYSCALE PRINT MANAGEMENT SCU • DICOM:STORAGE COMMITMENT SERVICE PUSH
Distributing processed images	• Distributes the image that has been subjected to image processing.

■ Guaranteeing Images

Function	Details
Guaranteeing the image distribution	• Supports the DICOM STORAGE COMMITMENT SERVICE (PUSH type) for making sure that the image has been distributed to the destination device normally.
	• Supports the DICOM workflow for notifying the information system of the completion of the examination. For this purpose, implementation of Performed Procedure Step SCU is being studied. (This function must be performed together with the Modality Worklist Management Service in the device in which the examination is registered as the CR modality.)
Temporarily storing input images	• Stores input images on the HD for a specified period. • Prevents images specified for storage from being deleted by the user. • Specifies certain conditions for deleting images (image storage for a certain period, HD capacity dependence and images deleted in order from older ones).

■ Adding Further Values

Function	Details
Masking specified areas	• Masks areas unnecessary for image diagnosis in a certain density. • Automatically processes images depending on the exposure menu. • Makes it possible for the user to specify areas while confirming the result on the display. • Changes the exposure menu for reprocessing the automatically processed image. • Makes it possible for the user to reprocess the automatically processed image while confirming it on the display.

■ Supporting the Image Application

Function	Details
Changing the system's common file	• Changes various films commonly used in the system. • Directly changes the contents of a file by specifying its name. • Changes the contents of a file as the image-related parameters are changed. • Backs up status of a file before it is modified.
Distributing/updating files	• Distributes a specified file to the related device in the system.

■ Image Data Format

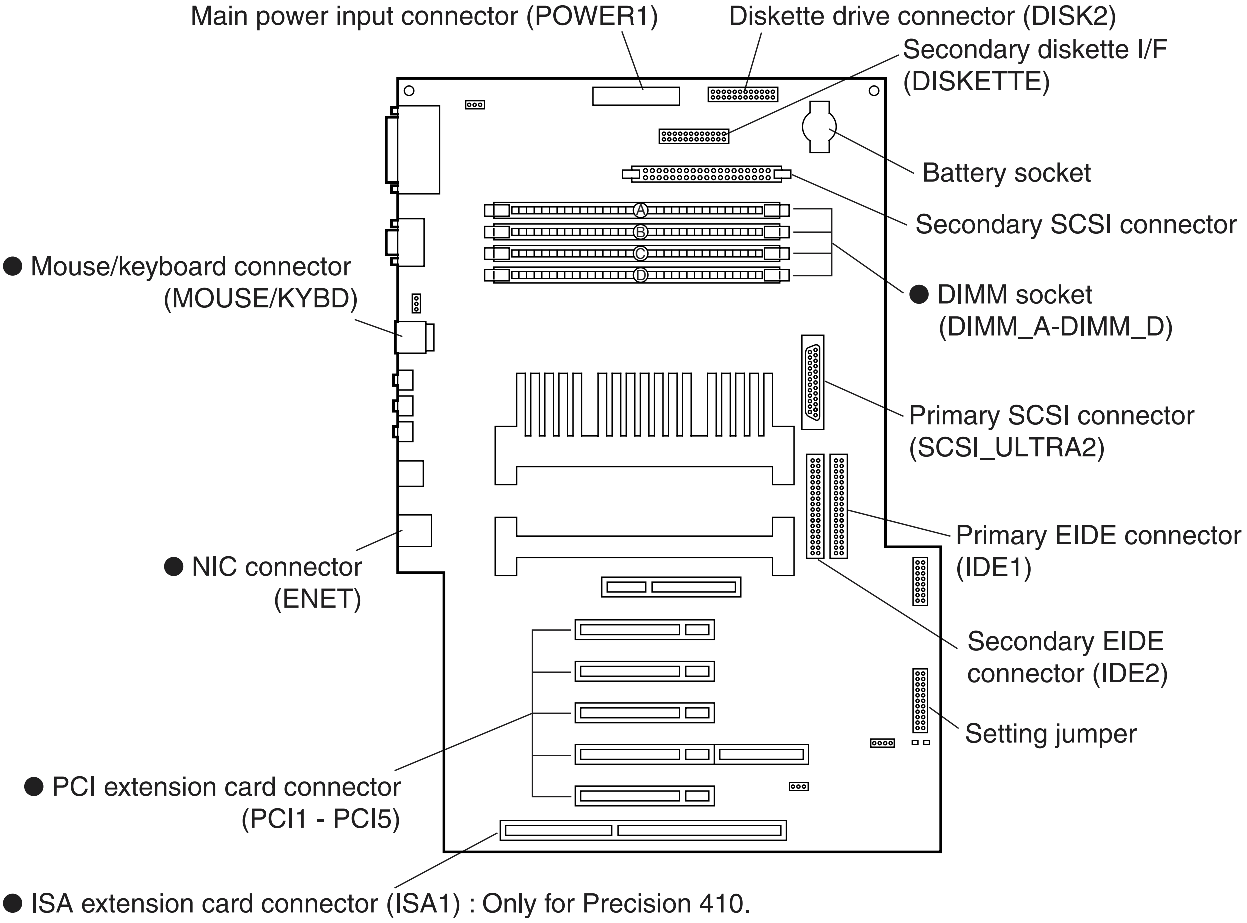
Processing		Processable Image Data
Storage		Storable as 16-bit image data. Stored in the magnetic disk as image data.
Compression and extension	CR images	Up to 10-bit images can be processed by the FUJI compression and extension algorithm.
	Multi-frame images	Up to 12-bit images can be processed using JPEG.
Image processing		Up to 12-bit images can be processed.
Image display		Displayed as 8-bit images (displayed by 256 tone gray-scale)

■ Functions of Display (21" Monitor, Video Card)

Video board	For normal resolution	Images can be displayed on a 256 resolution gray scale by connecting the PCI bus. Refresh rate: Above 60 Hz Pixels: 1600H × 1200V
	For high resolution	Images can be displayed on a 256 resolution gray scale by connecting the PCI bus. Refresh rate: Above 60 Hz Pixels: 2000H × 2500V
21" monitor	For normal resolution	Pixels: 1600H × 1200V Landscape type Luminance: Above 300 nit Refresh rate: Above 60 Hz
	For high resolution	Pixels: 2000H × 2500V Portrait type Luminance: Above 300 nit Refresh rate: Above 60 Hz

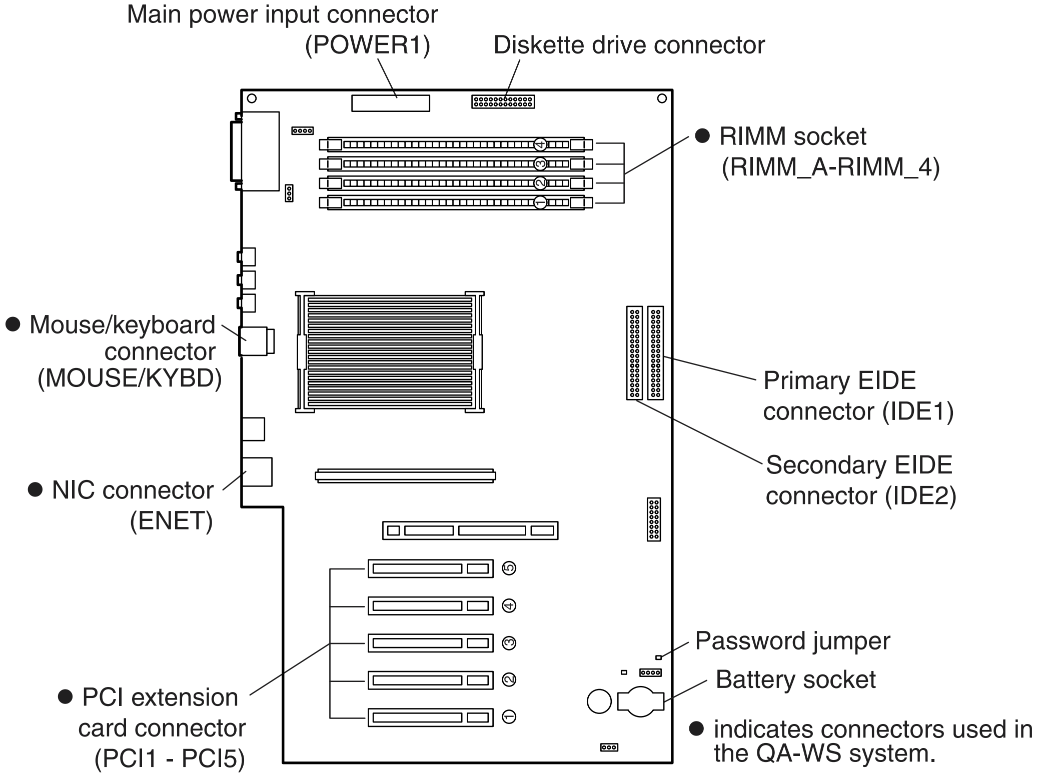
2. Internal Slots/Connectors of Control Unit

Connector/board installation positions are illustrated below.


Main power input connector (POWER1)
Diskette drive connector (DISK2)
Secondary diskette I/F (DISKETTE)
Battery socket
Secondary SCSI connector
● DIMM socket (DIMM_A-DIMM_D)
Primary SCSI connector (SCSI_ULTRA2)
Primary EIDE connector (IDE1)
Secondary EIDE connector (IDE2)
Setting jumper
● Mouse/keyboard connector (MOUSE/KYBD)
● NIC connector (ENET)
● PCI extension card connector (PCI1 - PCI5)
● ISA extension card connector (ISA1) : Only for Precision 410.
A
B
C
D

● indicates connectors used in the QA-WS system.

Fig. System Board Functions (Precision 410/420)


Main power input connector (POWER1)
Diskette drive connector
● RIMM socket (RIMM_A-RIMM_4)
4
3
2
1
● Mouse/keyboard connector (MOUSE/KYBD)
Primary EIDE connector (IDE1)
Secondary EIDE connector (IDE2)
● NIC connector (ENET)
5
4
3
2
1
Password jumper
Battery socket
● PCI extension card connector (PCI1 - PCI5)

● indicates connectors used in the QA-WS system.

Fig. System Board Functions (Precision 330)

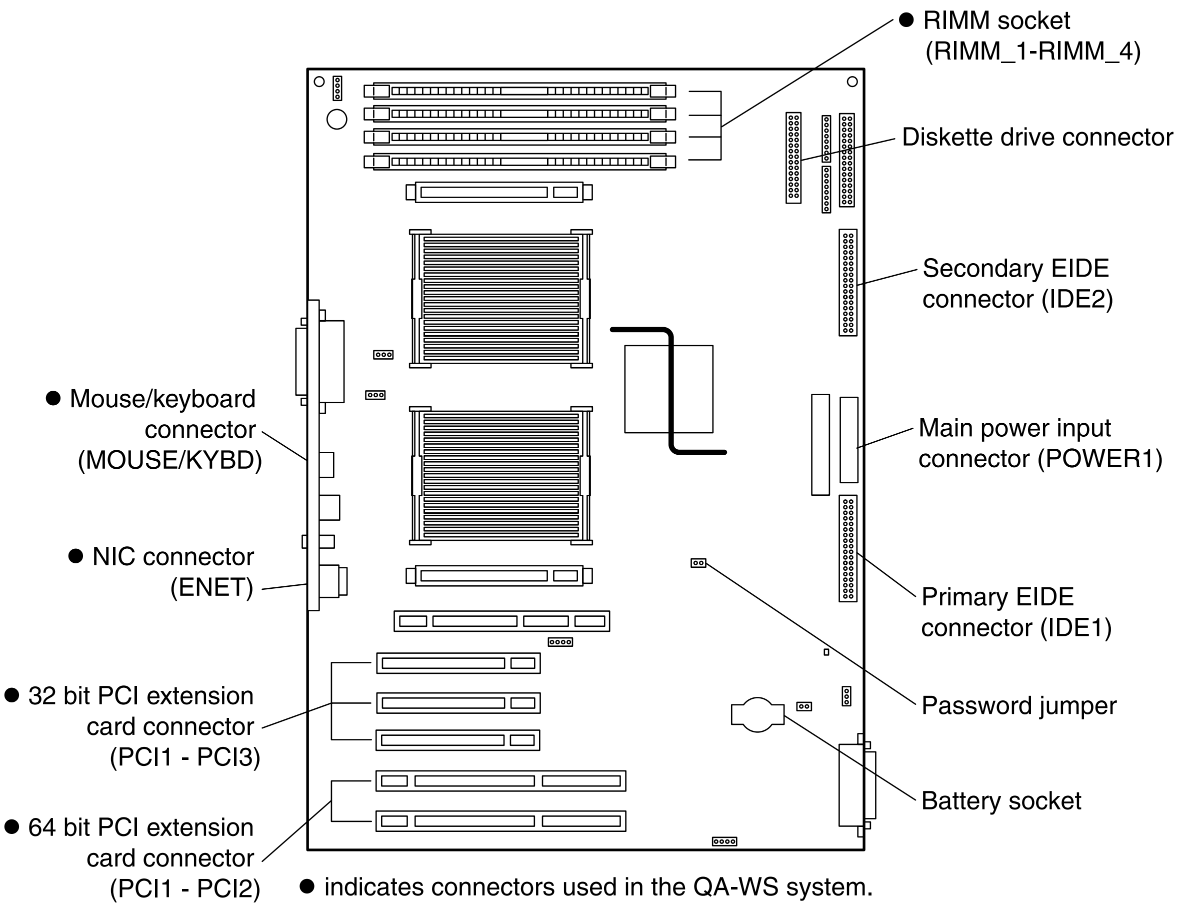

● RIMM socket (RIMM_1-RIMM_4)
Diskette drive connector
Secondary EIDE connector (IDE2)
Main power input connector (POWER1)
Primary EIDE connector (IDE1)
Password jumper
Battery socket
● Mouse/keyboard connector (MOUSE/KYBD)
● NIC connector (ENET)
● 32 bit PCI extension card connector (PCI1 - PCI3)
● 64 bit PCI extension card connector (PCI1 - PCI2)
● indicates connectors used in the QA-WS system.

Fig. System Board Functions (Precision 530)

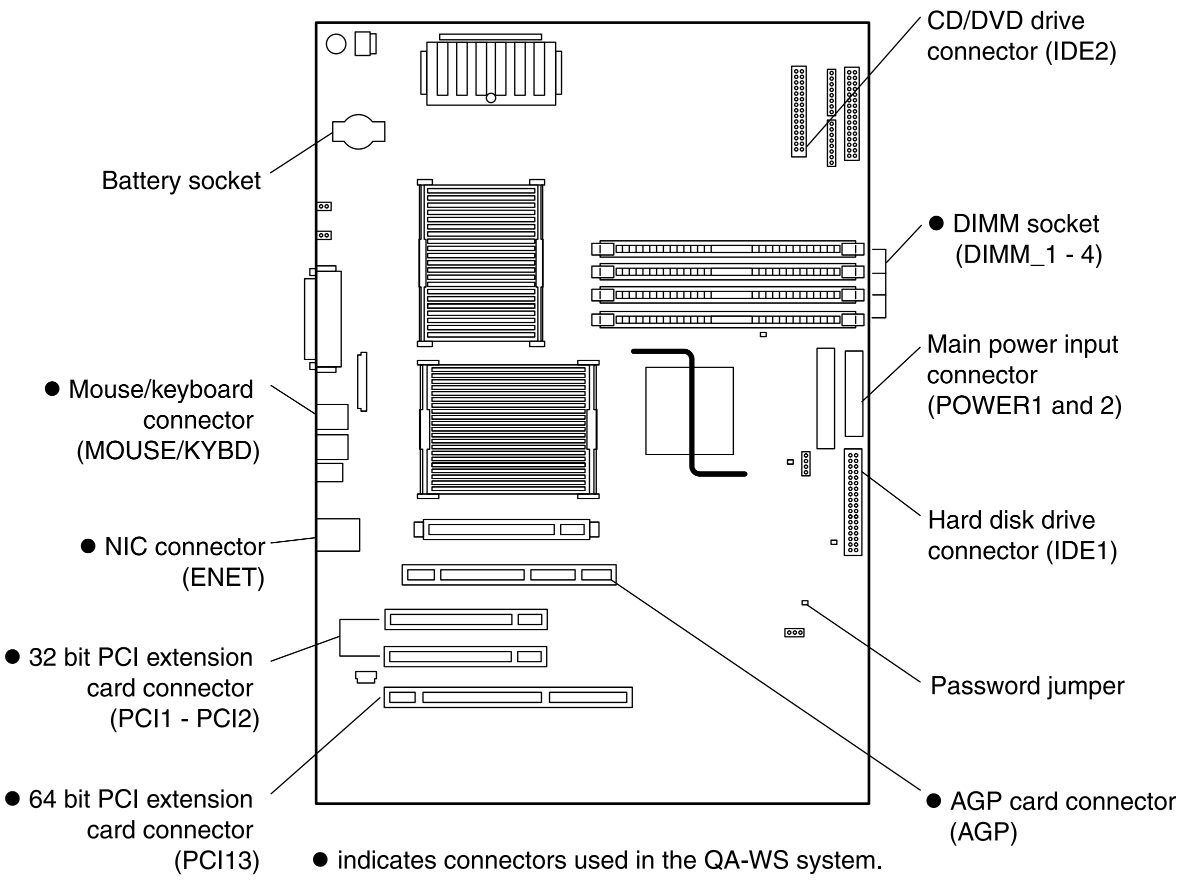
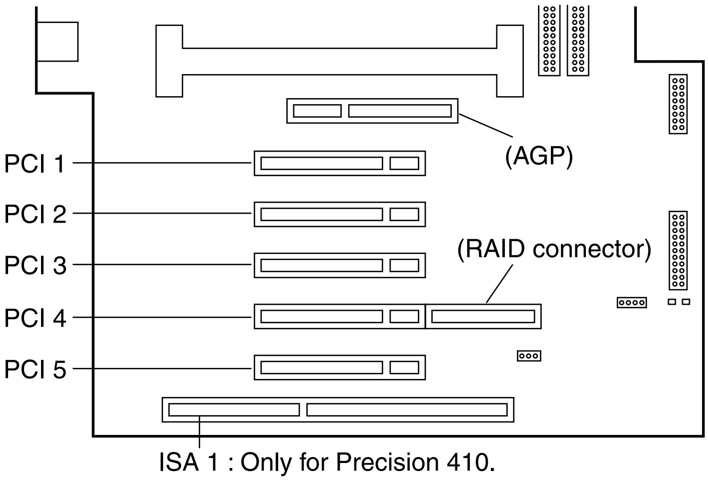

CD/DVD drive connector (IDE2)
● DIMM socket (DIMM_1 - 4)
Main power input connector (POWER1 and 2)
Hard disk drive connector (IDE1)
Password jumper
● AGP card connector (AGP)
Battery socket
● Mouse/keyboard connector (MOUSE/KYBD)
● NIC connector (ENET)
● 32 bit PCI extension card connector (PCI1 - PCI2)
● 64 bit PCI extension card connector (PCI13)
● indicates connectors used in the QA-WS system.

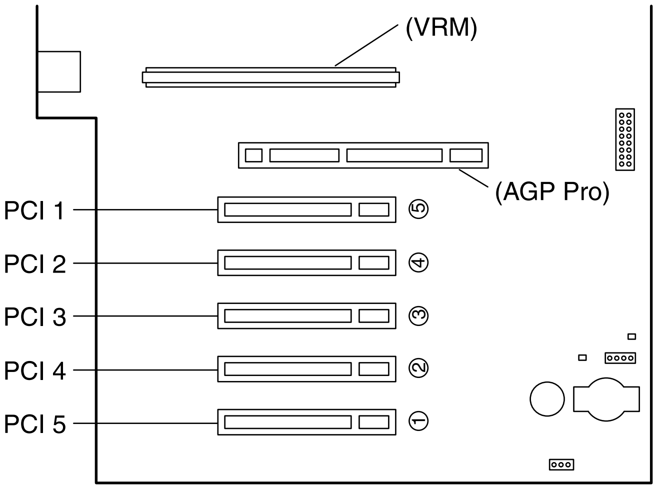
Fig. System Board Functions (Precision 450)

■ Expansion Card Slot


PCI 1
PCI 2
PCI 3
PCI 4
PCI 5
(AGP)
(RAID connector)
ISA 1 : Only for Precision 410.

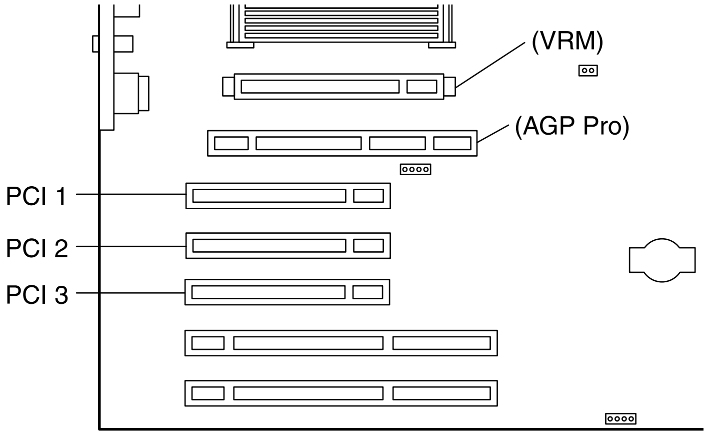
Board Name	Slot Name
Video board MGA-MIL 2P/4F	PCI1
Image processing board QPI01A	PCI2
FCR/DMS I/F board (PEI01A)	PCI3
	PCI4
	PCI5
FCR/DMS I/F board DXA01A : Only when Precision 410 is used.	ISA1

Fig. Riser Board Extension Slot Configuration (Precision 410/420)


(VRM)
(AGP Pro)
PCI 1
PCI 2
PCI 3
PCI 4
PCI 5
⑤
④
③
②
①

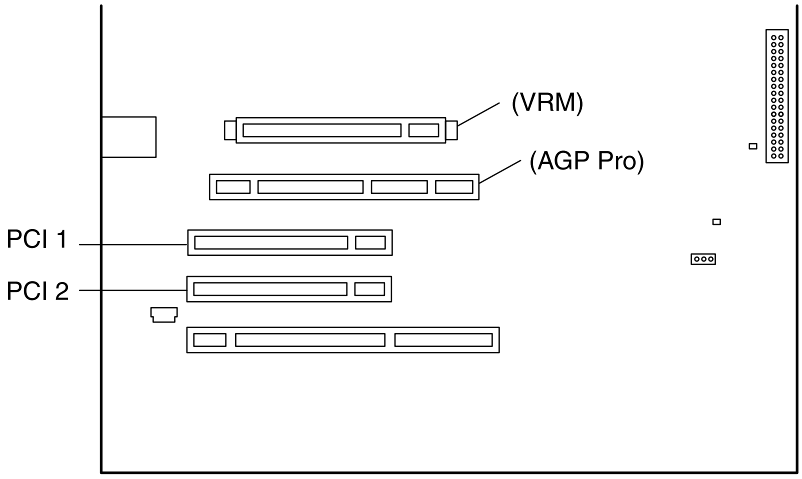
Board Name	Slot Name
SCSI board	PCI 1
Image processing board (QPI01A)	PCI 2
FCR/DMS I/F board (PEI01A)	PCI 3
FCR/DMS I/F board (PEI01A)	PCI 4
	PCI 5
Video board (G450/nVIDIA)	AGP Pro

Fig. Riser Board Extension Slot Configuration (Precision 330)



Board Name	Slot Name
Video board (G450/ATI Radeon VE)	AGP Pro
Image processing board (QPI01A) or FCR/DMS I/F board (PEI01A)	PCI 1
Image processing board (QPI01A) or FCR/DMS I/F board (PEI01A)	PCI 2
Image processing board (QPI01A) or FCR/DMS I/F board (PEI01A)	PCI 3

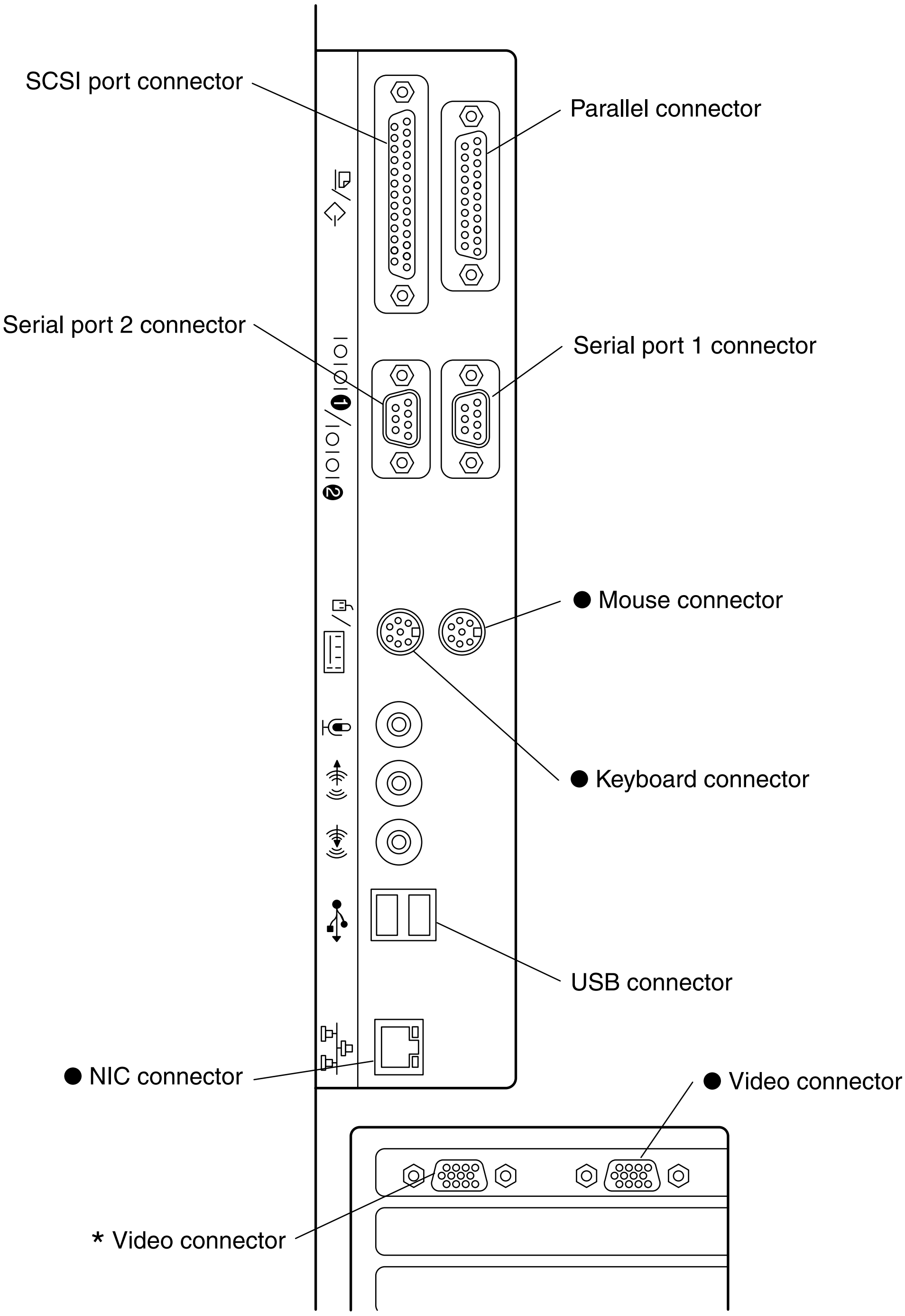
Fig. Riser Board Extension Slot Configuration (Precision 530)



Board Name	Slot Name
Video board (G450/ATI Radeon 900)	AGP Pro
Image processing board (QPI01A) or FCR/DMS I/F board (PEI01A)	PCI 1
Image processing board (QPI01A) or FCR/DMS I/F board (PEI01A)	PCI 2

Fig. Riser Board Extension Slot Configuration (Precision 450)

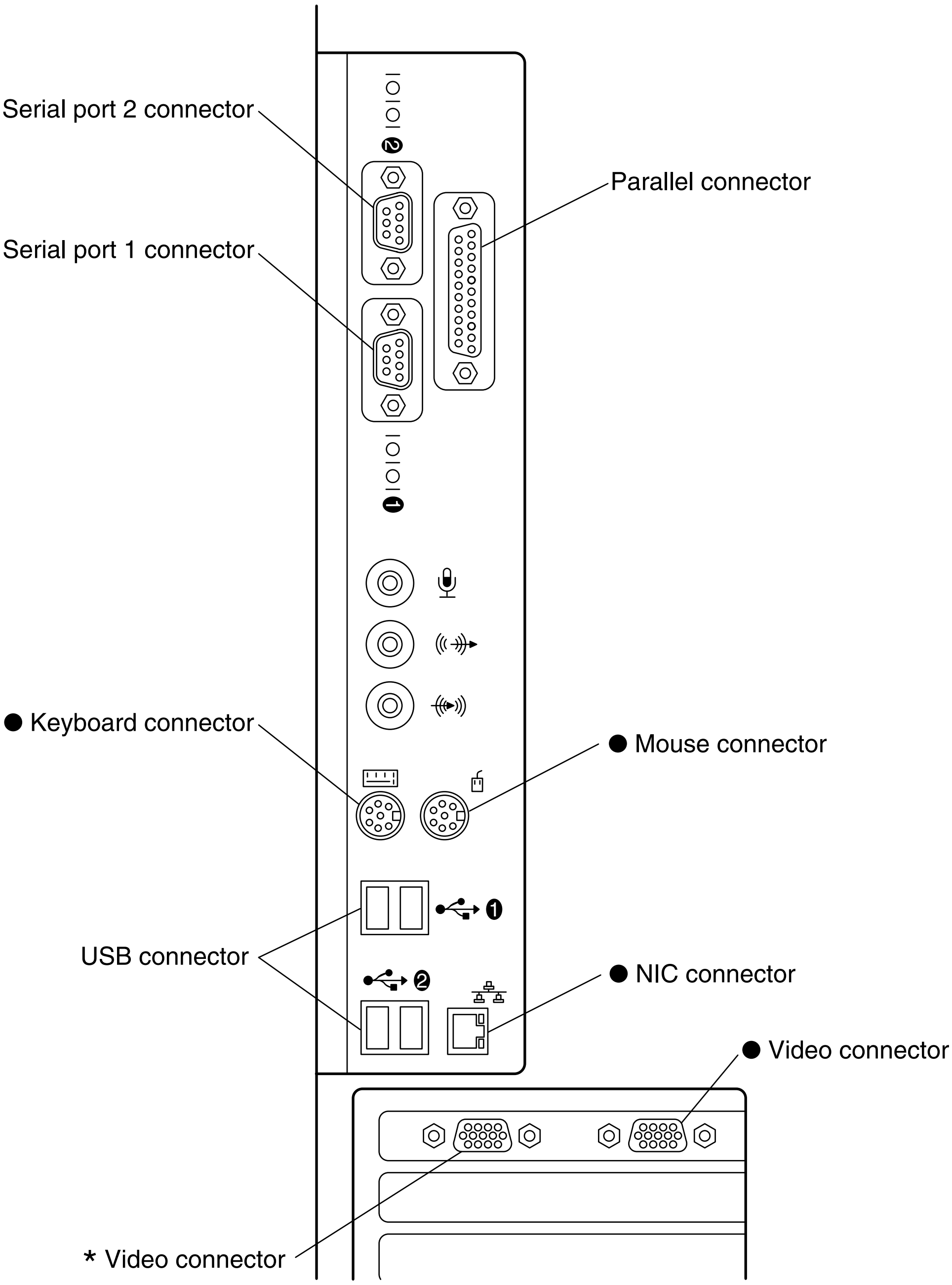
■ Connection of Connectors


SCSI port connector
Parallel connector
Serial port 2 connector
Serial port 1 connector
● Mouse connector
● Keyboard connector
USB connector
● NIC connector
● Video connector
* Video connector

● indicates connectors used in the QA-WS system.

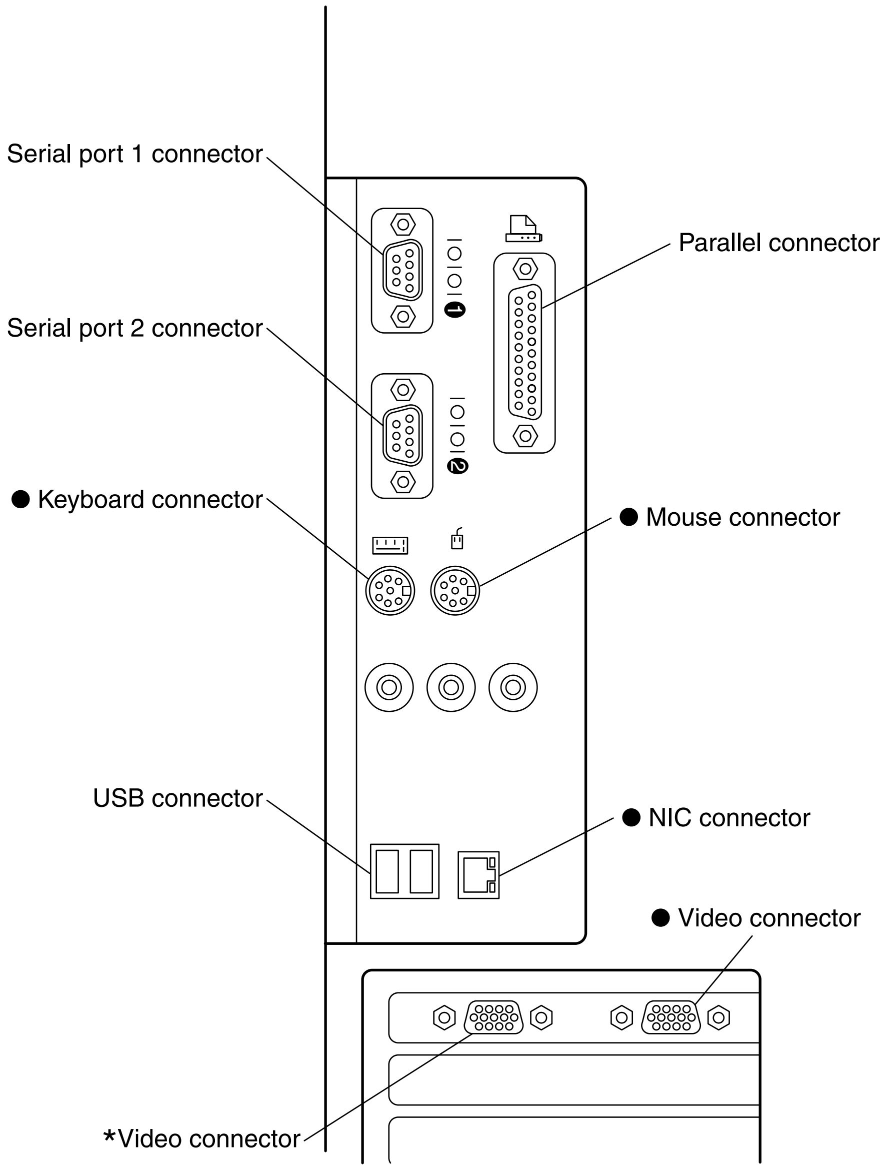
Do not use video connector marked with the “*”.

Fig. Connector Configuration on the Back of the PC (Precision 410/420)


Serial port 2 connector
Serial port 1 connector
Parallel connector
● Keyboard connector
● Mouse connector
USB connector
● NIC connector
● Video connector
* Video connector

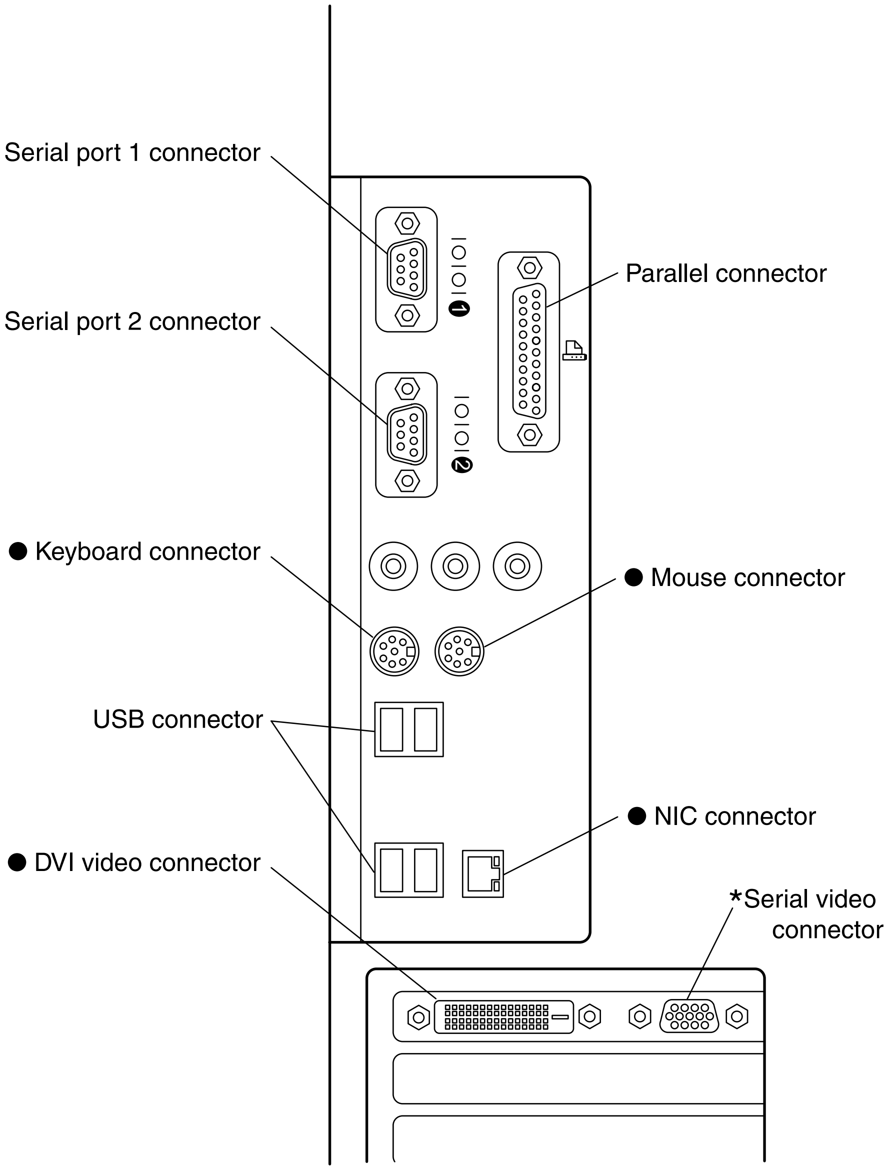
● indicates connectors used in the QA-WS system.
Do not use video connector marked with the "*".

Fig. Connector Configuration on the Back of the PC (Precision 330)


Serial port 1 connector
Parallel connector
Serial port 2 connector
● Keyboard connector
● Mouse connector
USB connector
● NIC connector
● Video connector
*Video connector

● indicates connectors used in the QA-WS system.
Do not use video connector marked with the "*".

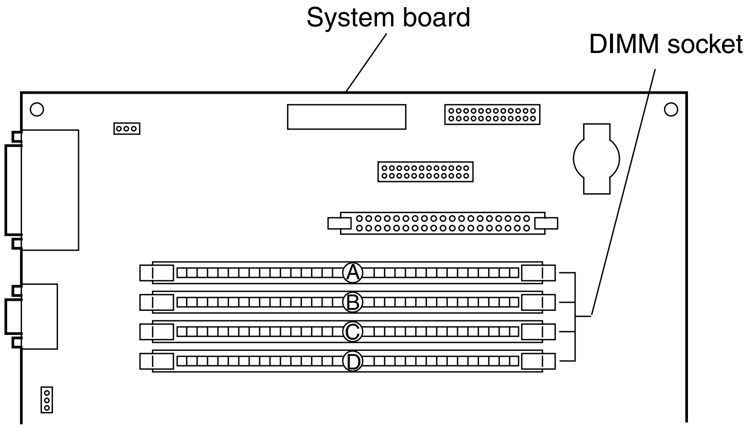
Fig. Connector Configuration on the Back of the PC (Precision 530)


Serial port 1 connector
Serial port 2 connector
● Keyboard connector
USB connector
● DVI video connector
Parallel connector
● Mouse connector
● NIC connector
*Serial video connector

● indicates connectors used in the QA-WS system.
Do not use video connector marked with the "*".

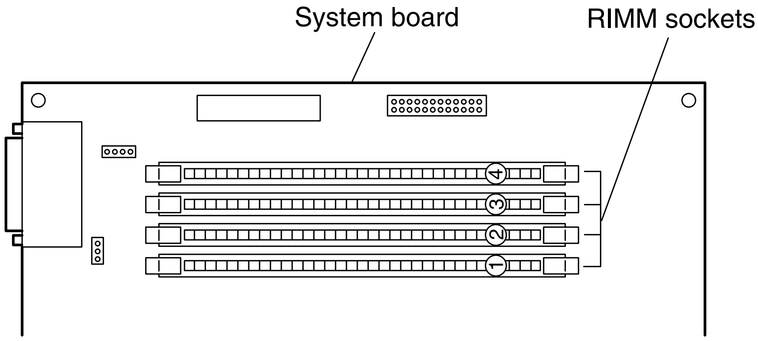
Fig. Connector Configuration on the Back of the PC (Precision 450)

■ Memory


System board
DIMM socket
A
B
C
D

Slot	Standard	For High Density Images
A	128MB DIMM	128MB DIMM
B	128MB DIMM	128MB DIMM
C	–	128MB DIMM
D	–	–

Fig. Memory Slots of System Board (Precision 410/420)

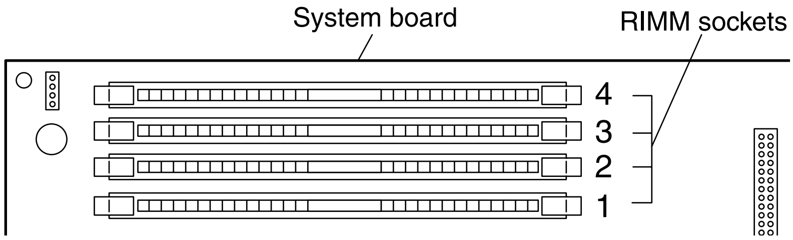

System board
RIMM sockets
④
③
②
①

Slot	Standard	For High Density Images[*2]
1	128MB	128MB
2	128MB	128MB
3	C-RIMM[*1]	64MB
4	C-RIMM	64MB

[*1] C-RIMM: Continuity RIMM

[*2] When image density was changed from Standard to High Denisty.

Fig. Memory Slots of System Board (Precision 330)

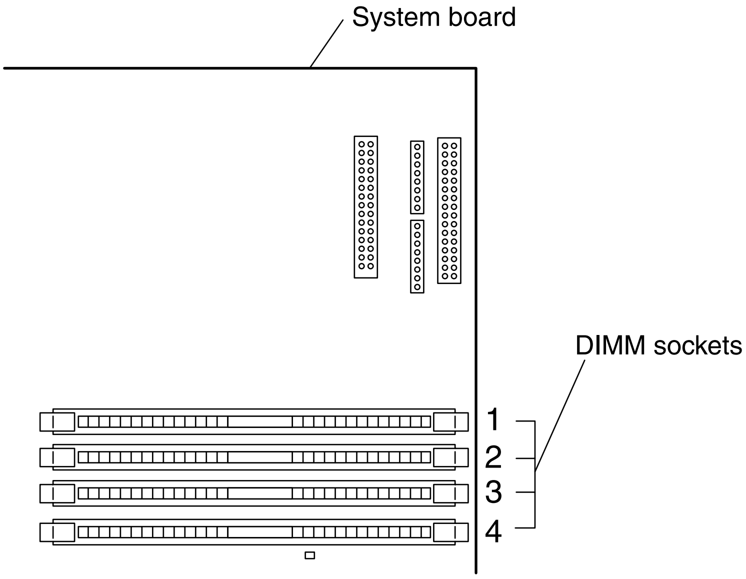

System board
RIMM sockets
4
3
2
1

Slot	Standard	For High Density Images*2
1	128MB	128MB
2	128MB	128MB
3	C-RIMM*1	64MB
4	C-RIMM	64MB

*1 C-RIMM: Continuity RIMM

*2 When image density was changed from Standard to High Denisty.

Fig. Memory Slots of System Board (Precision 530)


System board
DIMM sockets
1
2
3
4

Slot	Standard	For High Density Images
1	128MB	128MB
2	128MB	128MB
3	–	128MB
4	–	128MB

Fig. Memory Slots of System Board (Precision 450)

3. Error Codes (Up to A01 version)

The errors described in this chapter are recorded by the Windows NT management tool "Event Viewer", When errors are displayed, refer to "4. Event Viewer".

X	Y	Z1	Z2

X : Error classification (Primary code)
Y : Error classification (Secondary code)
Z1, Z2 : Detail code
X, Y, Z1, and Z2 are in hexadecimal form.

◆ NOTE ◆

Error codes listed herein are applicable to software of version A01 or earlier.
For error codes applicable to software version A02 or later, see the “A02 Version Error Codes,” the Supplement to “Maintenance” in this Service Manual.

■ Error Classification Code

Error Classification Code (X)	Meaning
0	Exceptional error when normal structured processing could not be performed
1	OS/general software program error
2	Spare
3	Spare
4	Image processing board, FCR/IF board device driver program error
5	Spare
6	Spare
7	External device error (No response, external device abnormality)
8	Error detected by image display subsystem
9	Error detected by external communicator subsystem
A	Error detected by message router subsystem
B	Error detected by image processing subsystem
C	Error detected by local image manager (database administration) subsystem
D	Error detected by configuration management subsystem
E	Subsystem detection error (Spare)
F	Subsystem detection error (Spare)

■ Exceptional Error When Normal Structured Processing Could not be Performed

Message No.	Error Message	Conditions and Causes for Error	Remedies
021F	Exceptional memory insufficiency error in EIFIMG	Failed to prepare for image transmission when inputting/outputting images with the E-i/f connection unit.	Restart this equipment as recovery by the memory administration function of the OS may be possible after reset, even though the memory range which can be secured by the OS has been exceeded.
0258	Could not secure memory.	The buffer for network communication cannot be secured while preparing for image input.	Restart this equipment as recovery by the memory administration function of the OS may be possible after reset, even though the memory range which can be secured by the OS has been exceeded.
0359	Failed to secure memory.	The buffer for network communication cannot be secured while preparing for image input.	Restart this equipment as recovery by the memory administration function of the OS may be possible after reset, even though the memory range which can be secured by the OS has been exceeded.

■ OS/General Software Program Error

Message No.	Error Message	Conditions and Causes for Error	Remedies
1152	Time-out between several image inputs.	Time-out occurred when other commands are executed during the input of combined images and load is imposed, or when the image cannot be transmitted due to some reason.	Check the status of this equipment or other device(connected to network), and perform operations again.
1251	Failed to transmit image data.	Time-out of image data transmission occurred during image output or when the Field Tool setting of the image input device is incorrect.	Check the status of the other device (connected to network) as it is not connected. Check if network related settings such as the transmission destination host name and IP address are correct in Field Tool settings.
121F	Could not secure memory required for image output queue registration.	Area cannot be secured for information registered for queue in image output.	Restart this equipment as recovery by the memory administration function of the OS may be possible after reset, even though the memory range which can be secured by the OS has been exceeded.
135B	Time-out occurred in network reception command.	When the network command could not be received from the other party during network communication with an external device within the specified time.	Check the status of the other device and perform operation again.
1361	Time-out occurred in reception of network command.	Time-out occurred in the network communication with the external device.	Check the status of the other device(connected to network), and perform operations again.
1F4F	Time-out occurred in FCR image output.	When no response was received from the other party during image output to the E-i/f connection unit within the specified time.	Check the status of the other device and connection cables.
1F52	Socket function failure Note: Socket function means the descriptor transmitting/receiving interface parameters.	Network related information of the other device(connected to network) in the Field Tool setting of this equipment is incorrect during image input.	Check that the image output side device is set correctly at this equipment by Field Tool.

■ Device Driver Program Errors of Image Processing Board, FCR I/F Board

Message No.	Error Message	Conditions and Causes for Error	Remedies
431F	(1) Failed in reception from the SMCU device interface . (2) Failed in transmission to the SMCU device interface.	When the device driver returned an unexpected error during reception/ transmission of a command from/to the E-i/f connection device, or when the other device broke the line (LastError=5).	Check the status of the other device and perform operations again.

■ External Device Error

Message No.	Error Message	Conditions and Causes for Error	Remedies
725B	Failed to reserve memory.	The buffer for network communication cannot be secured during image output.	Restart this equipment as recovery by the memory administration function of the OS may be possible after reset, even though the memory range which can be secured by the OS has been exceeded.
7261			

■ Image Display Subsystem

Message No.	Error Message	Conditions and Causes for Error	Remedies
8500	Installation is not complete, cannot start.	The key CD-ROM is not executed properly.	Execute key registry operations with the key CD-ROM.
8501	Command definition file error.	Command file error	The command definition file in the memory may be abnormal. Re-install the application software.

■ External Communicator Subsystem Error

Message No.	Error Message	Conditions and Causes for Error	Remedies
9522	Rejected image transmission request from the FCR/DMS connection device.	When attempted to receive high density images although this unit is set so that it cannot receive such images.	Set to receive high density images or set to the other device to interpolate and output high density images, and resend the images again.
954F	Received unexpected FCR/DMS command or illegal FCR/DMS command.	(1) When some error occurred when inputting/outputting images with the E-i/f connection unit. (2) When illegal data is generated on the communication route. (3) When the other device generates an illegal command sequence.	Check the connected cables, etc., and resend the error images.
9552	Image received is illegal.	High density images are received during image input (outside specifications of the slave).	Check the Field Tool setting if high density images have been set for this equipment at the output device, correct the setting as necessary, and perform operations again.
9F22	Time-out occurred while waiting for image data reception to end during FCR image input.	Reception of image data did not end during the specified time when inputting images from the E-i/f connection unit.	Check the status or setting of the other device.
9F25	An error occurred during serial line testing .	An error occurred during confirmation of connection with the E-i/f connection unit.	Check the status or setting of this equipment or the other device.
9F4F	Received image input stop notification during FCR image output.	When the other device issues an image input stop notification during image output to the E-i/f connection unit.	Check the status of the other device.
9F51	Failed in image transfer reservation.	No appropriate disk space at the device receiving images during image output. Or attempts were made to output high density images to other devices (connected to network) unable to receive such images during image output.	As the computer cannot receive high density images (outside the specifications), check if the settings of the computer are correct, and if the outputting device is attempting to transmit high density images, and perform operations again.
9F52	Error occurred during image data transfer.	Time-out occurred due to load imposed from the use of other commands during image input, or the image output side has not sent the image data due to some reason.	Check if this equipment is unable to receive images, and if problems occur during image transmission at the other device (connected to network), and perform operations again.

■ External Communicator Sub System Detection Error (DICOM)

Message No.	Error Message	Conditions and Causes of Error	Remedies
9503	Cannot record images at current settings. Check the configuration management: network settings (DICOM) of the distribution destination node. Test date of input image information is illegal. Notified error to connected host.	The distribution destination node is set to DICOM, but DICOM support is set to OFF in this equipment. Or no protocol is set at the destination node (normally not possible).	(1) Set the DICOM support setting of this equipment to ON. (2) Change the protocol settings of connected host. (3)Cancel the distribution setting.
9556	Test date of input image information is illegal. Notified error to connected host.	Connected host attempted to send image with illegal test date value (this value does not exist or outside range).	Check if any images transmitted are illegal.
	Test time of input image information is illegal. Notified error to connected host.	Connected host attempted to send image with illegal test time value (this value does not exist or outside range).	
	Test date of input image information is illegal. Notified error to connected host.	Connected host attempted to send image with illegal modality value (this value does not exist or outside range).	
	Anatomical region menu code of input image information is illegal. Notified error to connected host.	Connected host attempted to send image with illegal anatomical region menu code value (this value does not exist or outside range).	
	FCR image ID of input image information is illegal. Notified error to connected host.	Connected host attempted to send image with illegal FCR image ID (this value does not exist or outside range).	
	Row value of input image information is illegal. Notified error to connected host.	Connected host attempted to send image with illegal Rows value (this value does not exist or outside range).	
	Column value of input image information is illegal. Notified error to connected host.	Connected host attempted to send image with illegal Columns value (this value does not exist or outside range).	
	Storage BIT value of input image information is illegal. Notified error to connected host.	Connected host attempted to send image with illegal storage bit value (this value does not exist or outside range).	

Message No.	Error Message	Conditions and Causes of Error	Remedies
9556	Expansion reading size of input image information is illegal. Notified error to connected host.	Connected host attempted to send image with illegal expansion read size code value (this value does not exist or outside range).	Check if any images transmitted are illegal.
	Attempted to send unprocessable image. Notified error to connected host.	Connected host attempted to send image other than overlay, thumbnail, original image.	
	Compression code during image transfer is illegal. Notified error to connected host.	Connected host attempted to send image with illegal compression code.	
	Assigned bit of input image is illegal. Notified error to connected host.	Connected host attempted to send image with illegal assigned bit value (this value does not exist or outside range).	
	Effective bit value of input image is illegal. Notified error to connected host.	Connected host attempted to send image with illegal effective bit value (this value does not exist or outside range).	
	Data size of input image is illegal. Notified error to connected host.	Data size of images which connected host attempted to send is illegal.	
	PIXEL size of input image is illegal. Notified error to connected host.	Connected host attempted to send image with illegal PIXEL value (this value does not exist or outside range).	
	LINE value of input image is illegal. Notified error to connected host.	Connected host attempted to send image with illegal LINE value (this value does not exist or outside range).	
	Image scanning direction value of input image information is illegal.	Connected host attempted to send image with illegal image scanning direction value (this value does not exist or outside range).	

Message No.	Error Message	Conditions and Causes of Error	Remedies
9562	Notified error to connected host. Check the configuration management:network settings (DICOM) of the distribution destination node.	SOP class VIP of image to be sent is not set for network for DICOIM of this equipment	Check if this images of this equipment is illegal.
	Cannot connect with connected host to which image is output. Check network settings or status of connected host.	DTK returned error "cannot connect to host". Failed in request for connection.	Set the correct SOP class VID for the configuration management (Field Tool) setting:network of this equipment (For DICOM). (1) Check if the connected host is started or standing by for input of images. (2) Check if the network is connected correctly. (3) Check again if settings of the connected host are correct with Field Tool.
	Connected host to which image was output rejected the connection request. Check the configuration management:network settings (DICOM) of the distribution destination node.	DTK returned error "other host rejected this request". Failed in request for connection or request for transfer.	(1) Check if the settings of the connected host for configuration management set by this equipment are suitable for the environment of the connected host. (2) Check if the images to be sent and method of sending (JPEG transfer, original image transfer) can be set at the connected host.
911F	Program error has occurred. (Failed in DICOM file ID processing.)	Internal error (detection of error in self-check, Win AP error, unexpected error)	Restart this equipment and test transfer by DICOM again.
9F01	Failed in recovery of input images.	Error in the data in the previous DICOM image input processing and it may be possible that the data could not be input.	(1) Refer to the one previous log using Event Viewer and check the error. (2) Delete the DCMxxxxx.DSM and DCMxxxxx.SMP files in the TEMP directory of the drive with DB (normally D) .
	Program error has occurred. (Failed in registration of DICOM-DCX.)	Installation of this equipment may not have been carried out properly.	If this error occurs even when this equipment is started, install it again.
9F04	Program error has occurred. (Failed in standby for external DICOM request.)	(1) Installation of this equipment may not have been carried out properly. (2) The configuration management sub system file (*.env) may be damaged. (3) The ODBC driver recommended for this equipment may not be installed. (4) The number of DICOM network input connections registered by registry may be exceeding the limit (1 to 4).	(1) If this error occurs even when this it is started, install it again. (2) Install the DBC driver recommended for this equipment. (3) Set the number of DICOM network input connections within the specified limit (1 to 4).

Message No.	Error Message	Conditions and Causes of Error	Remedies
9F04	Program error has occurred. (Failed at end of external DICOM request.)	Internal error (error detected in self-check, WinAPI error, unexpected error)	Press the OK button in the error message box and continue the procedure to end.
	Program error has occurred. (Failed during external DICOM request processing.)	(1) Error in configuration management (2)Internal error (error detected in self-check, WinAPI error, unexpected error)	(1) Refer to the one previous log using Event Viewer and if an error has occurred in configuration management (sub system:CF), delete the DICOM .env file. Start the Field Tool, and set DICOM again. (2) If no error has occurred in configuration management, start this equipment again.
9F1F	Program error has occurred. (Failed in generation of DICOM threading.)	Internal error (error detected in self-check, WinAPI error, unexpected error)	Restart equipment.
9F50	Could not send one of the specified images. Could not find information required for transfer.	Could not perform cue registration because no information required for image transfer in the image to be transferred when reserving the FCR or FINP/FNIP output.	Some images cannot be transferred by DICOM. The images which can be output are; <FCR> •Effective bit is 10 •Size code is present <FINP> •Effective bit is 8, 10 •Size code is present •Pixel/structure size is present •Test date and time are present •Sample per pixel=1& •Photometric Inter pretation = MONOCH
9F60	Program error has occurred. (Failed in DICOM data exchange.)	Internal error (error detected in self-check, WinAPI error, unexpected error) during DICOM input.	If errors occur even if this equipment has been restarted, delete the DCMXXXX.dcm, DCMXXXX.cmp files in the TEMP directory of the drive with the DB of this equipment. Perform DICOM transfer again.
	Program error has occurred. (Failed in DICOM storage.)	Internal error (error detected in self-check, WinAPI error, unexpected error)	Restart this equipment and attempt DICOM transfer again.
	No response from host to which image was input.	The host connected by DICOM may not be operating normally.	(1) Check the status and settings of the connected host, and attempt DICOM transfer again. (2) Check if the image to be input or transfer method (JPEG transfer, original image transfer) contradicts the settings of the connected host using Field Tool.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9F62	Network obstacle in image output processing. (Failed in DICOM output association.)	The DTK transfer text registration processing or connection request processing returned an error during DICOM output.	(1) Check if the connected host has been started or is standing by for image input. (2) Check if the network is connected properly. (3) Check again if the settings on the connected host are correct using Field Tool.
	Network obstacle in image output processing. (Failed in DICOM output.)	The DTK connection decryption processing or error information acquisition processing returned an error during DICOM output.	
	Program error has occurred. (Failed in obtaining association results by DICOM output.)	Could not obtain the results of the transfer request to the connected host during DICOM output.	
	Program error has occurred. (Failed in DICOM stream compilation.)	Internal error (error detected in self-check, WinAPI error, unexpected error)	Restart this equipment and attempt DICOM transfer again.
	Settings (Service Class or Transfer Syntax) of the connected host for image transfer are insufficient.	No AE setting in the DICOM setting of the connected host of Field Tool has been set for the image to be sent.	Set AE information which can be transferred by DICOM setting of the connected host in Field Tool.
	Check the network settings (for DICOM) for configuration transfer and connected host.		
	Program error has occurred. (Failed in image information class operations.)	Internal error (error detected in self-check, WinAPI error, unexpected error)	Restart this equipment and attempt DICOM setting again.
	Program error has occurred. (Failed in deletion of DICOM output temporary file.)	Could not delete the temporary file (the temporary file is damaged or has already been deleted).	Delete this XXXXX.stm file in the TEMP directory of the DB file.
9F62	No response from the connected host to which images are output.	Time-out ccurred in the connection request to the connected host during DICOM output.	(1) Check the status and settings of the connected host and attempt transfer again from cue. (2) Increase the timeout setting for DICOM in Field Tool.
	No response from the connected host to which images are output. The images may not have reached the connected host properly.	Timeout occurred in the image transfer to the connected host during DICOM output.	
	Program error has occurred. (Failed in DICOM data exchange.)	The image information to be output by DICOM may be damaged.	If the error occurs even after restarting this equipment, delete the corresponding image using the delete command.

■ Image Processing Subsystem

Message No.	Error Message	Conditions and Causes for Error	Remedies
B0nn	This product does not support the image processing board.	The image processing board is specified in configuration management although it is not supported by the product used.	Set the setting for the image processing board to "No" in Field Tool, and start the system again.
B2nn	Insufficient memory.	Insufficient memory.	Restart this equipment as recovery by the memory administration function of the OS may be possible after reset, even though the memory range which can be secured by the OS has been exceeded.
B3nn	The image data file is damaged.	The image data file is damaged due to some reason.	Delete the image with the error by user operations (delete command) and acquire the image again.Memory expansion is recommended.
B3nn	The image data file specified does not exist.	The image data file has been deleted due to some reason.	Delete the image with the error by user operations (delete command) and acquire the image again.

■ Local Image Manager (DB Management) Subsystem Detection Error

Message No.	Error Message	Conditions and Causes for Error	Remedies
C001	Startup time-out of other subsystems.	Terminated abnormally due to system-down, etc.	Re-start after shut-down.
C004	Failed in reconstruction. Note: Error occurred during reconstruction of the database.	(1) Problem which occurred during installation. (2) Hardware (HDD) problem.	(1) Install the application and ODBC driver again. (2) Replace the HDD.
C101	Inappropriate database.	The database administration information is damaged.	Start Field Tool, and execute "Database reconstruction".
C202	Failed to secure memory.	The memory is insufficient.	Restart this equipment after shutdown as recovery by the memory administration function of the OS may be possible after reset, even though the memory range which can be secured by the OS has been exceeded. Expand the memory in case this error occur frequently.
C404	No free space in the hard disk.	No free space on the hard disk.	Delete unrequired images by user operations

■ Field Tool Detection Error

Message No.	Error Message	Display Command Name	Conditions and Causes for Error	Remedies
None	Incorrect input code. Enter input code again.	Field Tool	Values outside the range specified in the specifications are input to the parameter input field, or when unapplicable values are input (not output to the event log).	Enter a value in the range specified again.
D067	Overlapping IP address.	Field Tool	The IP address entered is already used during the addition or modification of the host in the network setting of other devices.	Enter an IP address that does not overlap with others again.
D068	Overlapping host name.	Field Tool	The host name entered is already used during the addition or modification of the host in the network setting of other devices.	Enter a host name that does not overlap with others again.
D069	No host name with corresponding attribute.	Field Tool	Attempts were made to add a new node to the retrieval group when there exists no host (node) with corresponding storage attributes in the setting of the retrieval group.	Add the storage attribute (O, H, M, etc.) of the corresponding host (node) in the network setting of other devices correctly, and then perform setting of the retrieval group again.

■ Configuration Management Message

Message No.	Error Message	Conditions and Causes for Error	Remedies
D201	Open error of configuration management file.	The file read cannot be opened in the startup of this equipment.	Re-install the application software.
D202	Table overflow of the configuration management file.	The number of data in the file read in the startup of this equipment is greater than that specified.	Re-install the application software if an error results after the file contents were rewritten by the text editor, etc., check if the changes made are correct, and correct as necessary.
D203	Inappropriate keyword described in the configuration management file. Note: Keyword means the program description rule.	Unmatching format due to the description of a keyword that differs from the specifications in the file read in the startup of this equipment.	Re-install the application software if an error results after the file contents were rewritten by the text editor, etc., check if the changes made are correct, and correct as necessary.

■ Additional Error Codes: Applicable for the DICOMPrinter Service (8601, 9601 - 9624, D501 - D51C)

Message No.	Error Message	Conditions and Causes of Error	Remedies
8601	The error is occurred in the process of the analysis of film strings configuration file.	The film annotation character bit-map generation component sent back an error during initialization of the film annotation character setup file.	Correct the error in the contents set up in the FilmStrFmt.env file.
9601	There is no exist the Image Display Format for DICOM Print process.	Input image information is not correct.	Check status of the input device. Reboot the system and then re-input images.
9601	There is no exist the Film Orientation for DICOM Print process.	Input image information is not correct.	Check status of the input device. Reboot the system and then re-input images.
9601	There is no exist the Image Position for DICOM Print process.	Input image information is not correct.	Check status of the input device. Reboot the system and then re-input images
9601	There is no exist the value of Rows for DICOM Print process.	Input image information is not correct.	Check status of the input device. Reboot the system and then re-input images
9601	There is no exist the value of columns for DICOM Print process.	Input image information is not correct.	Check status of the input device. Reboot the system and then re-input images
9601	There is no exist the Pixel Representation for DICOM Print process.	Input image information is not correct.	Check status of the input device. Reboot the system and then re-input images
9601	There is no exist Extended Reading Size in the image information for DICOM Print process.	Input image information is not correct.	Check image information transferred from the input device. Reboot the system and then retry image input.
9601	There is no exist Image Scanning Direction in the image information for DICOM Print process.	Input image information is not correct.	Check image information transferred from the input device. Reboot the system and then retry image input.
9603	It cannot to reserve the outgoing process. The value of Image Display Format is out of range for DICOM Print process.	Input image information is not correct.	Check image information transferred from the input device. Reboot the system and then retry image input.
9604	It was failed to get the print information with the specified DICOM Print AE-title. Please make confirmation with the contents of the configuration file.	Contents of the configuration management setup file (DICOMPrint.env) are not correct or input image information is not correct.	AE of the transfer destination node has not been specified to DICOMPrint.env. Specify AE to DICOMPrint.env and reboot the system.
9605	Identification key for getting the BIN number is illegal. Please make confirmation with the contents of the configuration file.	Contents of the configuration management setup file (FilmDst.env) are not correct or input image information is not correct.	Check contents of the configuration management setup file.
9607	It was failed to create the Film Session for DICOM Print process.	Image information to be printed is not correct or an error occurred on the Printer side.	Check status of the Printer side device. Check the configuration management setup file. Reboot the system and retry image input

Message No.	Error Message	Conditions and Causes of Error	Remedies
9608	It was failed to create the Film Box for DICOM Print process.	Image information to be printed is not correct or an error occurred on the Printer side.	Check status of the Printer side device. Check the configuration management setup file. Reboot the system and retry image input.
9609	It was failed to set the image to the Film Box for DICOM Print process.	Image information to be printed is not correct or an error occurred on the Printer side.	Check status of the Printer side device. Check the configuration management setup file. Reboot the system and retry image input.
960A	It was failed to do the Printing for DICOM Print process.	An error has occurred on the Printer side.	Check status of the Printer side device. Check the configuration management setup file. Reboot the system and retry image input.
960B	DICOM Print process cannot proceed because of unsupported number of bit image.	Valid bit number of the image to be printed is other than 8, 10 or 12.	DICOM Print processing cannot handle images of valid bit number other than 8, 10 or 12.
960C	Program error was occurred because of the illegal number of image in requested output format for DICOM Print process.	A multiple number of images have been specified for 2on1 LR output.	Input image is not correct or program is defective.
960D	There is no AE-title information in the destination device. Please make confirmation with the contents of the configuration file.	Print SOP has not been specified for the configuration management DICOM setup.	Configuration management setup: Add Print SOP to the DICOM-AE and retry.
690E	Program error was occurred because of the existence of the different value in the Image Display Format in each images.	Values in the Image Display Format of images belonging to the same group are different.	Input image is not correct or program is defective.
690F	Program error was occurred because of the number of image in one group.	The number of images in a set is 0 or 4 or more.	Input image is not correct or program is defective.
9610	Program error was occurred because of the failure of the conversion of DICOM Print data.	System operation error	Reboot the system and then execute the same operation again.
9611	There is the illegal behavior of the DICOM Printer.	DICOM Printer operation is not correct. Error occurred in the Reference Image Box Sequence of N-CREATE-RSP in the Basic Film Box.	The DICOM Printer is defective. Contact Printer vendor.
9612	Program error is occurred because of the illegal image information. It cannot to output to DICOM Printer.	Image data necessary for output to the printer is not sufficient.	Reboot the system and retry operations under the same conditions
9613	Program error is occurred because of the error in the common class in the conversion of DICOM Print data.	A configuration management error has occurred.	With the Event Viewer function, view the error status right before error occurrence.
9614	Program error is occurred because of the error in the management of configuration in the proceeding of DICOM Print out.	A common class error has occurred.	With the Event Viewer function, view the error status right before error occurrence.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9615	Program error is occurred because of the error in the DICOM Print out.	System operation error	Reboot the system and then execute the same operations again.
9616	It was timed out because of the no response from the DICOM printer.	No responses come from the DICOM Printer.	Check DICOM Printer status.
9617	There is no connection establishment with DICOM printer.	Connection to the DICOM Printer has not been established.	Network to the DICOM Printer is disconnected or the DICOM Printer has not been set up.
9618	Program error was occurred because of the error in DICOM OCX component.	An unexpected error was sent back by OCX.	Reboot the system and then execute the same operations again.
9619	Error was sent back from DICOM printer. (BFS N-CREATE)	An error was sent back by the DICOM Printer.	Check whether or not MEDIUM_TYPE and FILM_DESTINATION of configuration management file DICOMPrint.env are of values supported by the DICOM Printer.
961A	Error was sent back from DICOM printer. (BFB N-CREATE)	An error was sent back by the DICOM Printer.	Check whether or not FILM_SIZE_ID, MAG_TYPE, SMOOTHING_TYPE, BORDER_DENSITY and TRIM of configuration management file DICOMPrint.env are of values supported by the DICOM Printer.
961B	Error was sent back from DICOM printer. (BIB N-SET)	An error was sent back by the DICOM Printer.	Check whether or not REQ_IMG_SIZE and 10BITS_STORED of configuration management file DICOMPrint.env are of values supported by the DICOM Printer. Check also that MAG_TYPE is not NONE if REQ_IMG_SIZE is SUPPORTED and that values specified for ImgSize.env are correct.
961C	Program error was occurred because of the failure in the creating film strings.	A program error has occurred while creating film annotation characters.	Contact SE.
961D	Error was occurred in the creating bitmap image of film strings.	The film annotation character bit-map creation component has sent an error back.	Contact SE.
961E	There is no assignment for the format in the film strings configuration file.	A format number that is not set to the film annotation character setup file has been specified.	Register to the FilmStrFmt.env file a format setup for the format number that is registered to the ImgSize.env file.
961F	Error was occurred in the process of the analysis of film strings configuration file.	The film annotation character bit-map creation component has sent an error back during initialization of the film annotation character setup file.	Correct the setup error of the FilmStrFmt.env file.
9620	There is the miss-setting in the setup of registry for film strings format.	Necessary values have not been registered or abnormal values have been specified for film annotation character registry setup.	Check film annotation character registry setup.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9621	Program error was occurred because of the failure in the drawing the scale.	A program error has occurred while drawing the scale.	Contact SE.
9622	Warning status was sent back from DICOM printer. (BFS N-CREATE)	A warning was sent back by the DICOM Printer.	Check whether configuration management file DICOMPrint.env values are supported by the DICOM Printer or not.
9623	"Error was occurred by the one of following reason, there is no connection establishment with DICOM printer, there is no responce from the DICOM printer or the request was rejected by the DICOM printer."	A failure resulted in connection to the DICOM Printer.	Check the DICOM Printer has been started or connected correctly.
9624	Error was sent back from DICOM printer. (BFB N-ACTION)	A warning was sent back by the DICOM Printer.	Reboot the system and the DICOM Printer and execute operations under the same conditions.
9624	Warning status was sent back from DICOM printer. (BFB N-CREATE)	A warning was sent back by the DICOM Printer.	Check whether configuration management file DICOMPrint.env values are supported by the DICOM Printer or not.
9624	Warning was sent back from DICOM printer. (BIB N-SET)	A warning was sent back by the DICOM Printer.	Check whether configuration management file DICOMPrint.env values are supported by the DICOM Printer or not.
D501	There is the illegal format.	The format described in the ENV file is illegal.	Check the ENV file description format (delimiter, etc.).
D502	There is the illegal AE-title.	The AE described in the ENV file is illegal.	Check that the AE name does not exceed 17 characters and that "( ) " " , : ; = \b" are not used in it.
D503	It should be set by 4 digit hex number for the warning code.	The Warning Code described in the ENV file is illegal.	Check that the Warning Code is a hexadecimal four-digit number.
D504	It should be set less than 16 with the number of warning code.	The Warning Code described in the ENV file is illegal.	Check that 17 or more Warning Codes have not been specified.
D505	There is unexpected EOF.	No delimiters have been described in the ENV file.	Check that the delimiter comes before the file's trailing end.
D506	There is no mandatory information (REQ_IMG_10BITS_STORED).	No mandatory information has been specified in the ENV file.	Check that the mandatory information has been specified.
D507	The internal program error was occurred.	This must not occur. If this error occurs, it is a bug.	Contact SE.
D508	The number of identifier or value is exceeded maximum number of limitation.	Identifiers and set values exceeding the maximum number have been specified for the ENV file.	Check that 11 sets or more of identifiers and set values have not been specified.
D509	There is the illegal BIN number.	The BIN number specified for the ENV file is illegal.	Check that the BIN number specified is within the range from 1 to 100.
D50A	The number of collation value are exceeded the maximum number of limitation.	An identification value exceeding the maximum predetermined value has been specified for the ENV file.	Check that 129 or less identification values have been specified.

Message No.	Error Message	Conditions and Causes of Error	Remedies
D50B	There is the illegal collation value.	An illegal identification value has been specified for the ENV file.	Check that the identification value specified does not exceed 65 characters.
D50C	The AE-titles are duplicated.	The two AE names have been described for the ENV file.	Check that the AE name has not been described duplicated.
D50D	The default information is duplicated.	The two pieces of default information have been described for the ENV file.	Check that the default information has not been described duplicated.
D50E	The value of size code is illegal.	An illegal size code has been specified for the ENV file.	Check that the correct size code has been specified.
D50F	The number of size code is exceeded the maximum number of limitation.	A size code exceeding the maximum predetermined number has been specified for the ENV file.	Check that 30 or less size codes have been specified.
D510	The requested image size is illegal.	An illegal image size has been described for the ENV file.	Check that the requested image size has been specified in the range from 0.1 to 9999.9. Make sure to describe one decimal place.
D511	The ratio for magification is illegal.	An illegal mag. rate has been described for the ENV file.	Specify the mag. rate within the range from 1 to 999.
D512	The film pattern is illegal.	An illegal film pattern has been described for the ENV file.	Check that the correct film pattern has been specified.
D513	"The combination with requested image size, film magnification ratio, film format are illegal."	An illegal combination has been described for the ENV file.	Check that the requested image size and the film mag. rate have been specified as a pair.
D514	"The number of the combination with film size, film orientation and film format are exceeded the maximum number of limitation."	Combinations exceeding the maximum number predetermined have been specified for the ENV file.	Check that 65 or more sets have not been specified.
D515	Error: Application software cannot map the data on the memory mapped file.	The setup information cannot be specified in the memory mapped file.	Contact SE.
D516	Exceptional error was occurred in the mapping file process.	An unexpected exceptional processing has occurred.	Contact SE.
D517	Error: Application software detected the invalid key word.	An illegal keyword has been described for the ENV file.	Check that no illegal keywords have been specified for the ENV file.
D518	Error: Application software cannot open the file.	The ENV file cannot be opened.	Check that the ENV file is available and that no exclusive processing is applicable.
D519	The number of AE setup information are exceeded the maximum number of limitation.	The number of AE names exceeding the maximum number predetermined has been specified for the ENV file.	Check that 801 or more sets have not been specified.
D51A	Error: Application software detected the exemption in the file i/o process.	An unexpected exceptional processing has occurred.	Contact SE.

Message No.	Error Message	Conditions and Causes of Error	Remedies
D51B	Error: Application software cannot set the entry to the memory mapped file.	The setup information cannot be acquired from the memory mapped file.	Contact SE.
D51C	Error: Application software detected the exemption in the GET function.	An unexpected exceptional processing has occurred.	Contact SE.

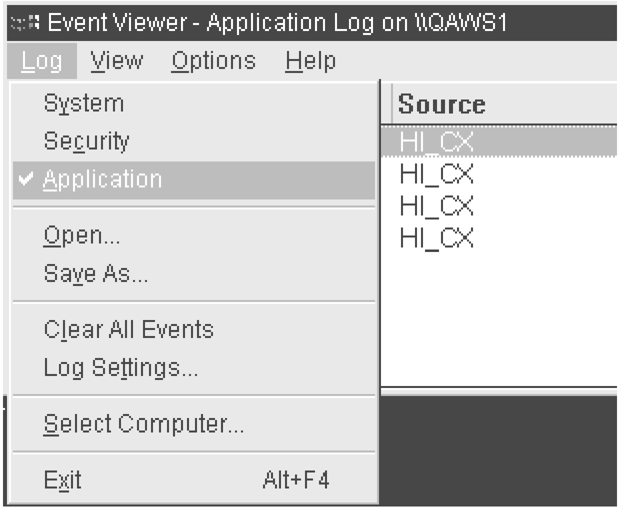
4. Event Viewer

4.1 Using the Event Viewer

Various events which occur while Windows NT is running are recorded in the Event Viewer.
Details of events such as resource information, the operating state of the system, etc. are recorded in the following event logs, which can be referred to determine the cause of errors which have occurred.

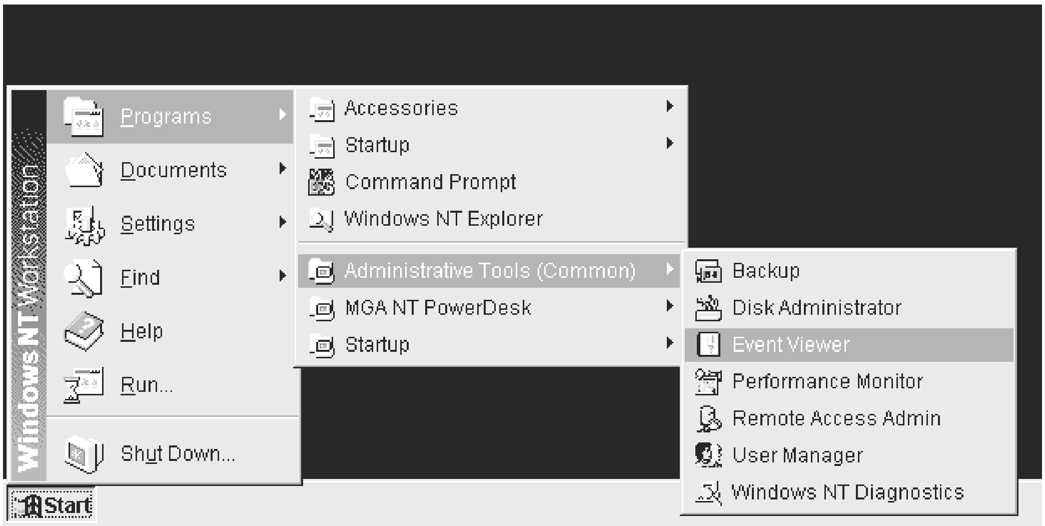
- System log
- Security log
- Application log

Application errors are recorded in the application log.
To display details of errors, click "Log" and then "Application".

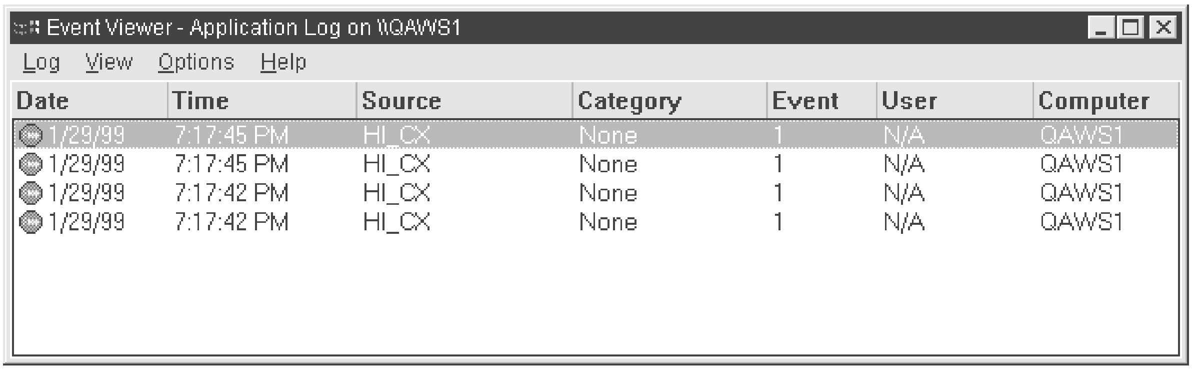

Event Viewer - Application Log on \\QAWS1
Log View Options Help
System
Security
✔ Application
Open...
Save As...
Clear All Events
Log Settings...
Select Computer...
Exit Alt+F4
Source
HI_CX
HI_CX
HI_CX
HI_CX

■ Starting the Event Viewer

Click [Start], point to "Programs", then "Administration Tools (Common)", and then click "Event Viewer".


Windows NT Workstation
Programs
Documents
Settings
Find
Help
Run...
Shut Down...
Start
Accessories
Startup
Command Prompt
Windows NT Explorer
Administrative Tools (Common)
MGA NT PowerDesk
Startup
Backup
Disk Administrator
Event Viewer
Performance Monitor
Remote Access Admin
User Manager
Windows NT Diagnostics

■ Screen Configuration



Date	Time	Source	Category	Event	User	Computer
1/29/99	7:17:45 PM	HI_CX	None	1	N/A	QAWS1
1/29/99	7:17:45 PM	HI_CX	None	1	N/A	QAWS1
1/29/99	7:17:42 PM	HI_CX	None	1	N/A	QAWS1
1/29/99	7:17:42 PM	HI_CX	None	1	N/A	QAWS1

■ Event Viewer Screen

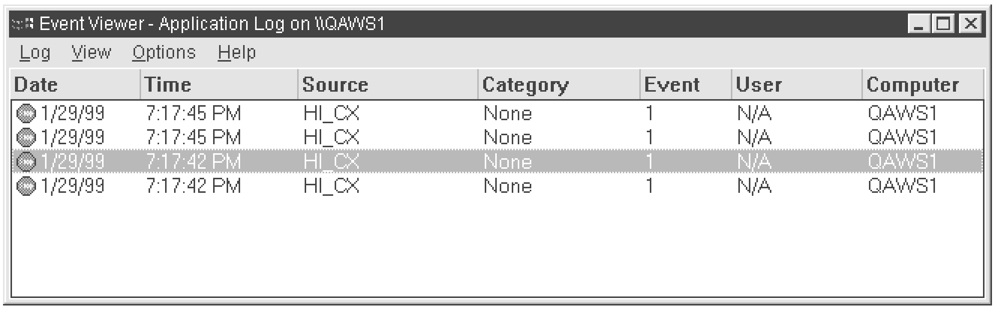
a. Icon

Icon	Meaning	Details
⊖	Error	Displayed when critical errors such as start up failure of the device driver and service, data loss, etc. occur.
ⓘ	Information	Indicates that the system started up normally (when start up of service, remote access, etc. was successful)
❗	Warning	Indicates that it may be a possible cause when an error occurs. Normally recorded in the log.

b. Date : Date of occurrence of event
c. Time : Time of occurrence of event
d. Source : Indicates the original application written with the event.
e. Category : Event category
f. Event : Event identification number
g. User : User name logged in when an event occurred. Displayed as N/A when the software does not specify the user name.
h. Computer : Computer name when the event occurred.

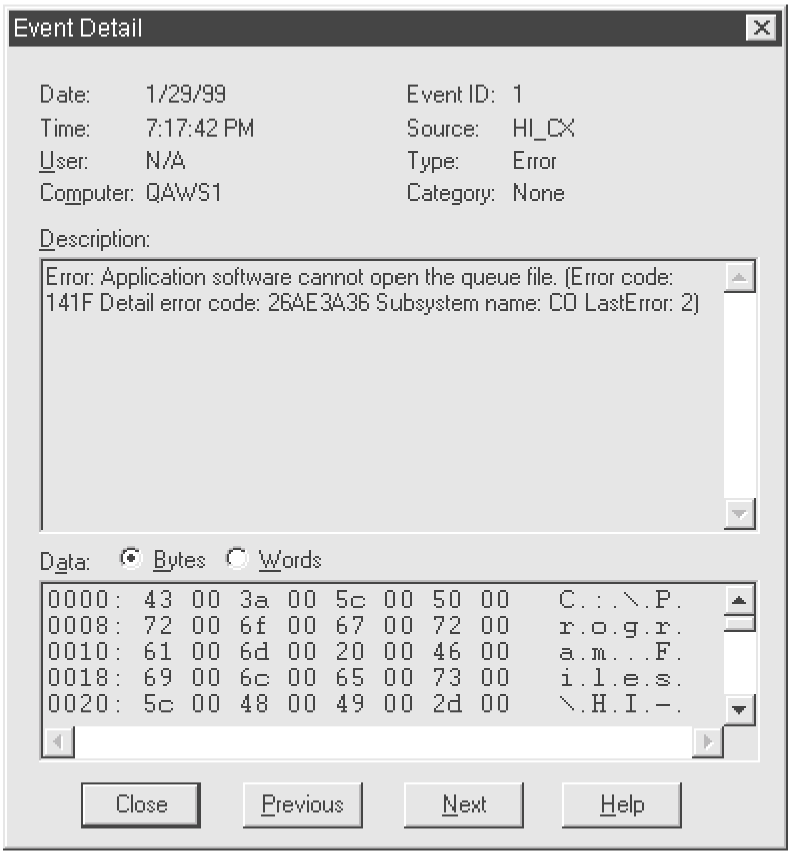
4.2 Details of Event

(1) Double-click the log to be displayed at the following screen.



Date	Time	Source	Category	Event	User	Computer
1/29/99	7:17:45 PM	HI_CX	None	1	N/A	QAWS1
1/29/99	7:17:45 PM	HI_CX	None	1	N/A	QAWS1
1/29/99	7:17:42 PM	HI_CX	None	1	N/A	QAWS1
1/29/99	7:17:42 PM	HI_CX	None	1	N/A	QAWS1

(2) The "Event Detail" dialog box appears.
Details of the dialog box are as follows.



Date: 1/29/99
Time: 7:17:42 PM
User: N/A
Computer: QAWS1
Event ID: 1
Source: HI_CX
Type: Error
Category: None

Description:
Error: Application software cannot open the queue file. (Error code: 141F Detail error code: 26AE3A36 Subsystem name: CO LastError: 2)

Data: ● Bytes ○ Words

```
0000: 43 00 3a 00 5c 00 50 00   C.:.\.P.
0008: 72 00 6f 00 67 00 72 00   r.o.g.r.
0010: 61 00 6d 00 20 00 46 00   a.m...F.
0018: 69 00 6c 00 65 00 73 00   i.l.e.s.
0020: 5c 00 48 00 49 00 2d 00   \.H.I.-.
```

Description (D): Describes the event logged.

Data(A) : Indicates where the event occurred in bytes and words.

◆ NOTE ◆

For details on Date, Time, User, Computer, Source and Category, refer to the "Event Viewer Screen" in "4.1 Using the Event Viewer".
For details on Type and Event ID, refer to "Event Viewer Screen" in "4.1 Using the Event Viewer".

(3) Click [Close] to close the "Event Detail" dialog box.

(4) To quit the Event Viewer, proceed to "4.5 Quitting the Event Viewer".

4.3 Saving Event Logs

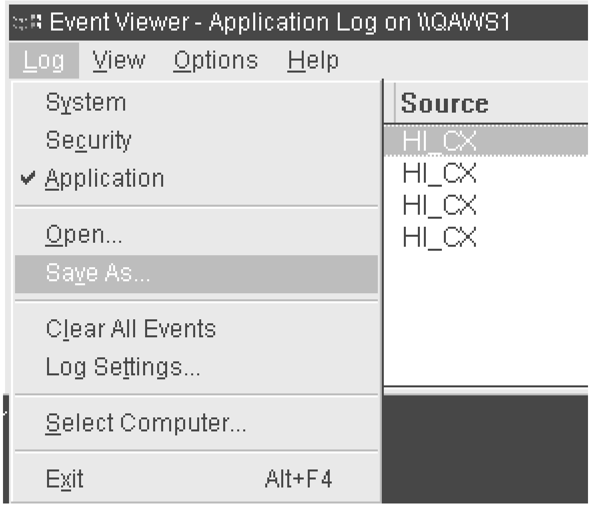
Perform the following procedure if event logs need to be brought back to the service center for analysis.

◆ *NOTE* ◆

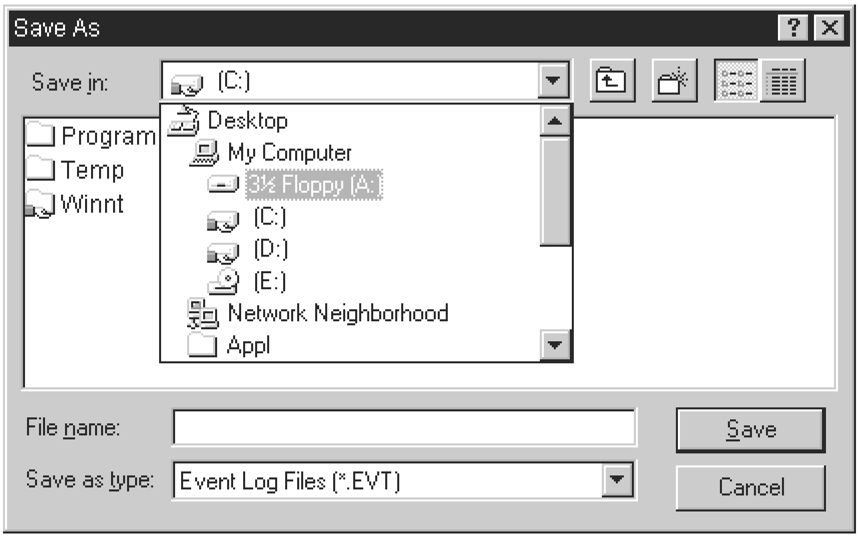
Before proceeding with this procedure, get ready a floppy disk (DOS formatted) for saving the event logs.

(1) Insert the floppy disk in the floppy disk drive.

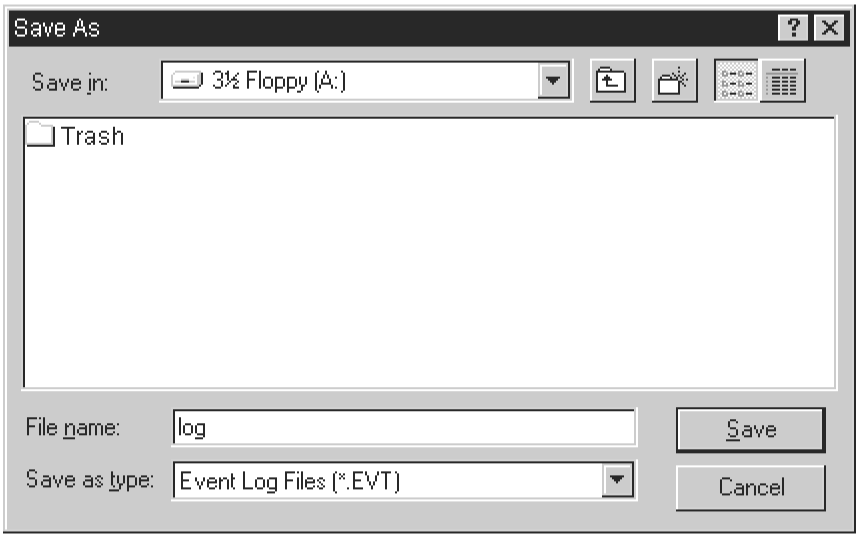
(2) Click "Log" on the menu bar, and then click "Save As".


Event Viewer - Application Log on \\QAWS1
Log
View
Options
Help
System
Security
✔ Application
Open...
Save As...
Clear All Events
Log Settings...
Select Computer...
Exit
Alt+F4
Source
HI_CX
HI_CX
HI_CX
HI_CX

(3) When the following screen appears, select "3 1/2 Floppy (A:)" in the "Save in:" box to save the event logs on the floppy disk.


Save As
?
✕
Save in:
(C:)
Program
Temp
Winnt
Desktop
My Computer
3½ Floppy (A:)
(C:)
(D:)
(E:)
Network Neighborhood
Appl
File name:
Save as type:
Event Log Files (*.EVT)
Save
Cancel

(4) Enter the file name (e.g.:log) in the "File name:" box, and click [Save].



File name: log

Save as type: Event Log Files (*.EVT)

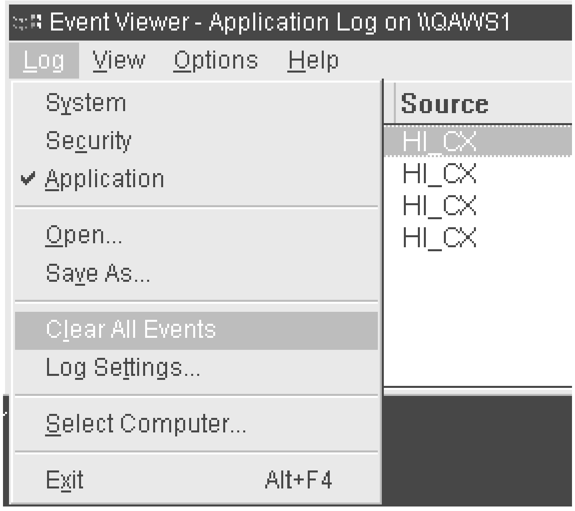
(5) When saved, the "Save As" dialog box disappears, indicating that the event logs have been saved. Check that the access lamp of the floppy disk drive has gone off, and remove the floppy disk.

(6) To quit the Event Viewer, proceed to "4.5 Quitting the Event Viewer".

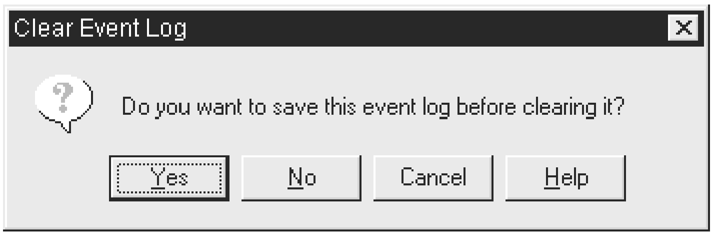
4.4 Deleting Event Logs

Event Viewer logs are normally updated to the value set in "Log Settings".
Perform the following procedure to clear all logs when installing this equipment.

(1) Click "Log" on the menu bar, and then click "Clear All Events".

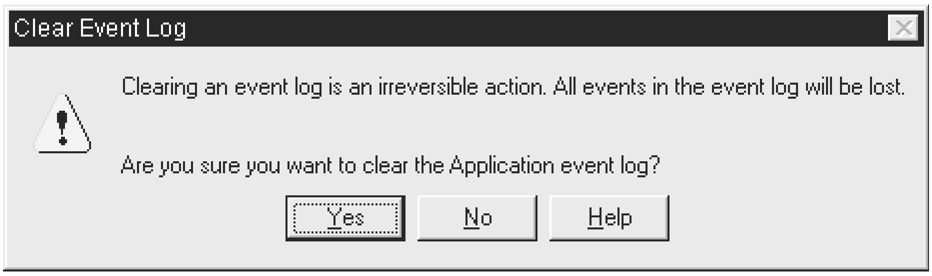

Event Viewer - Application Log on \\QAWS1
Log
View
Options
Help
System
Security
✓ Application
Open...
Save As...
Clear All Events
Log Settings...
Select Computer...
Exit Alt+F4
Source
HI_CX
HI_CX
HI_CX
HI_CX

(2) When the following screen appears, click [No].


Clear Event Log
Yes
No
Cancel
Help

Do you want to save this event log before clearing it?

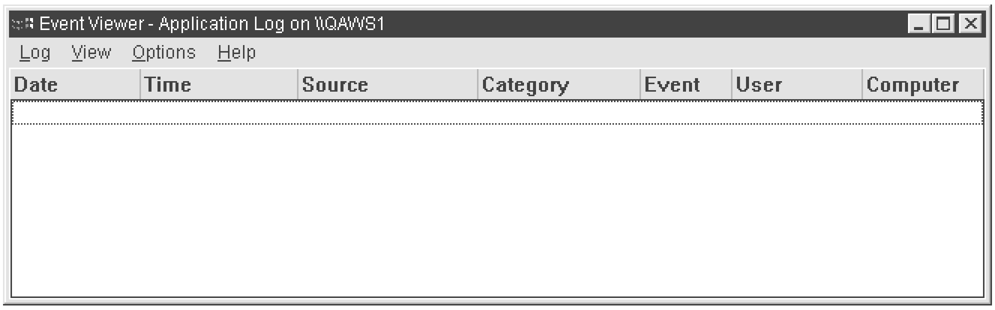
(3) When the following screen appears, click [Yes] to clear the logs.


Clear Event Log
Yes
No
Help

Clearing an event log is an irreversible action. All events in the event log will be lost.

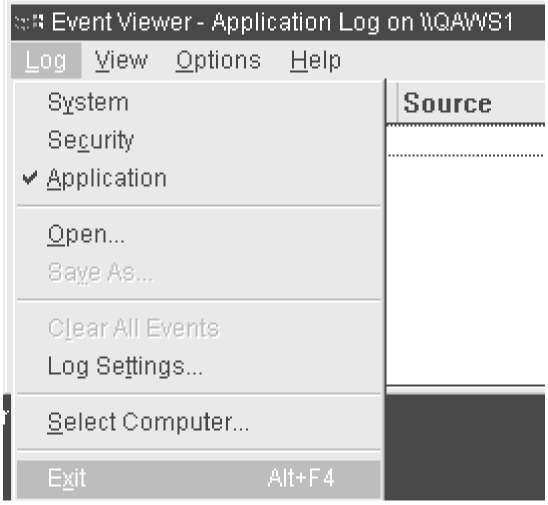
Are you sure you want to clear the Application event log?

(4) The logs will be cleared from the "Event Viewer - Application Log on \\ HI-C655A" screen, and the following screen appears.


Event Viewer - Application Log on \\QAWS1
Log
View
Options
Help
Date
Time
Source
Category
Event
User
Computer

4.5 Quitting the Event Viewer

(1) Click "Log", and then click "Exit".


Event Viewer - Application Log on \\QAWS1
Log
View
Options
Help
Source
System
Security
✔ Application
Open...
Save As...
Clear All Events
Log Settings...
Select Computer...
Exit Alt+F4

5. Replacements

Normally, when the control unit or internal parts malfunction, the replacements described below are not required based on the maintenance agreement for the control unit. However, if parts need to be replaced at the site to locate a problem, refer to the "DELL Users Manual" and perform the replacements.
References mentioned herein correspond to chapters contained in the “DELL Users Manual”.

See the following URLs to replace Precision 420, 330 and 530 parts as required.

- Precision 420 ➔ http://support.jp.dell.com/docs/systems/ws420/
- Precision 330 ➔ http://support.jp.dell.com/docs/systems/ws330/
- Precision 530 ➔ http://support.jp.dell.com/docs/systems/ws530/

5.1 Cover

Removal

⇒ Chapter 8 Removing the Computer Cover

Attachment

⇒ Chapter 8 Attaching the Computer Cover

5.2 Expansion Card

The video board and image processing board are attached to the PCI bus of the expansion card gauge. Replace the expansion card when replacing these boards.

Removal

⇒ Chapter 9 Removing of Expansion Card

Attachment

⇒ Chapter 9 Attaching the Expansion Card

5.3 Control Unit Memory

Removal

⇒ Chapter 9 Expanding the Memory
⇒ Chapter 9 Removing the DIMM

Attachment

⇒ Chapter 9 Attaching the DIMM

6. Service Parts List

6.1 How to Use the Service Parts List

■ RANK

Work ID symbols (Parts requiring special handling in replacements, etc.)

Only indicated on applicable parts.
Replace and handle all parts with "R" symbol normally.

Symbol	Description
R	Repairable parts
Q,T	Symbol for overseas use only

Export regulation mark

This + mark is assigned to parts subject to Export regulations.
Parts without the + mark are not subject to Export regulations.

Symbol	Description
+	Parts subject to Export regulations

Fault rankings used for estimating recommended stock quantity

All parts are assigned a symbol letter from A to E.

Symbol	Description
A	Consumable parts or parts that will be replaced at short intervals
B	Parts that may become faulty accidentally and have a relatively high failure rate
C	Parts that have a sufficiently long MTBF, but are expected to have a high failure rate
D	Parts that have a sufficiently long MTBF, but are expected to become faulty
E	Parts that are necessary for fault analysis or parts that may be needed in case of faults such as man-induced damage

RANK column description

The symbols for Fault Ranking, Parts Handling, and Export regulation are assigned in the corresponding order indicated.
Thus, one to three types of symbols are indicated in the RANK column.

REF. NO.

A number for indicating each part in the Service Parts Exploded Views.

PART NUMBER

Code number that is unique to each part. The rightmost letter of the code number denotes the following ;

For hardware

The letter denotes the version number of a part. If parts have different version numbers, they are upward-compatible.

For software

The letter denotes the software specifications.

PART NAME

General name of a part.

QTY.

Quantity of parts used in a unit or assembly.

REMARKS

Unique name of a part or its relevant information.

SERIAL NUMBER

The units may contain different parts depending on their shipment control number. SERIAL NUMBER indicates the shipment control number to which the parts are applicable. If this column is blank, the parts are applicable to all the relevant units.

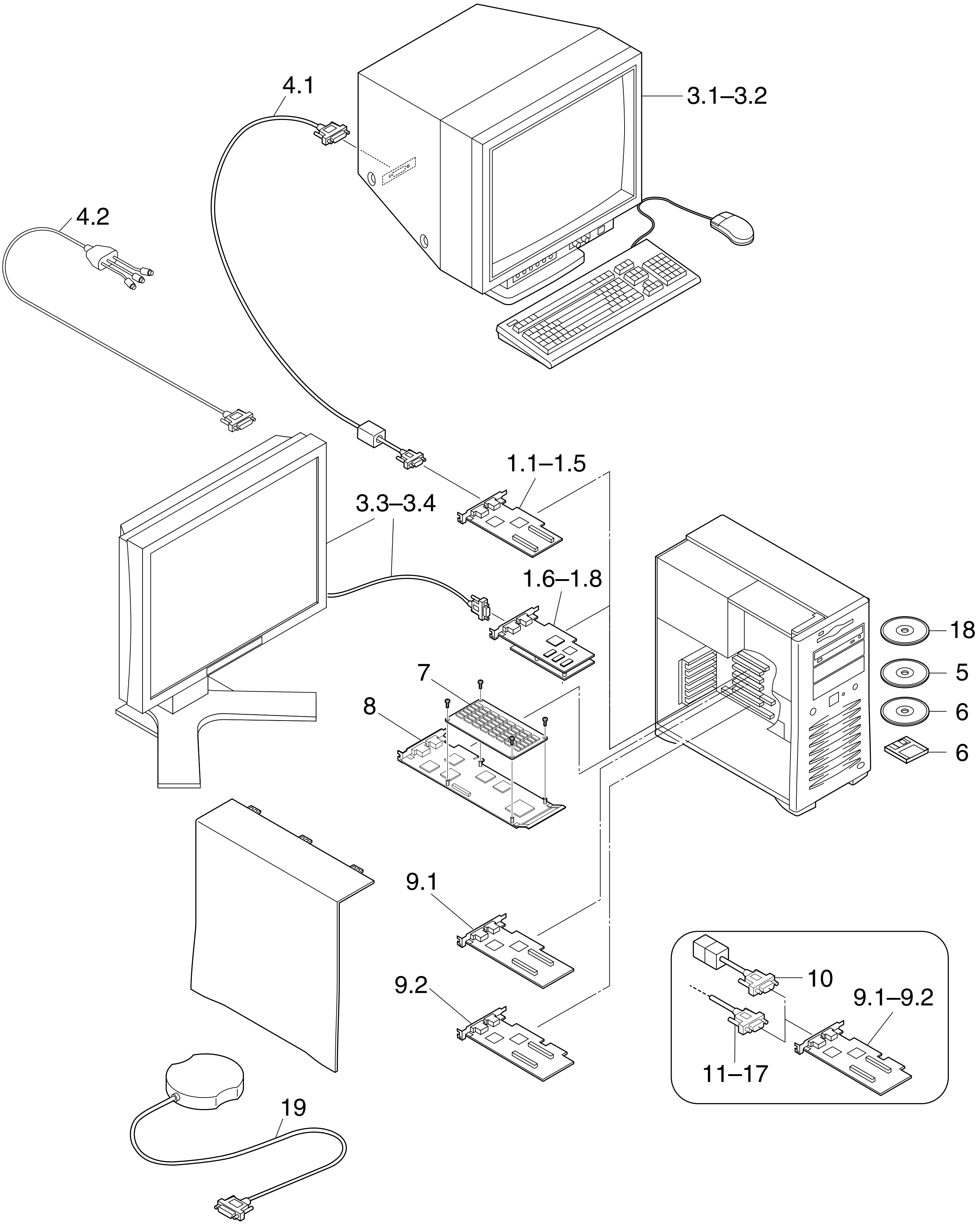
Recommended quantity of spare parts

It is recommended as a rough guide to hold in stock a specified quantity of parts according to the rank (A to E) assigned to the parts. Parts to be replaced at periodic intervals must be held in stock separately.
Adjust the quantity of parts stock depending on the number of working units (N) as prescribed below.

Q: Quantity used in a single system

- $N=1$
  - rank $A=1+Q\times0.3$
  - rank $C=1+Q\times0.05$
  - rank $D=1+Q\times0.02$
- $2\leq N\leq10$
  - rank $A=2+N\times Q\times0.3$
  - rank $C=2+N\times Q\times0.05$
  - rank $D=1+N\times Q\times0.02$
- $11\leq N\leq300$
  - rank $A=3+N\times Q\times0.3$
  - rank $C=3+N\times Q\times0.05$
  - rank $D=2+N\times Q\times0.02$

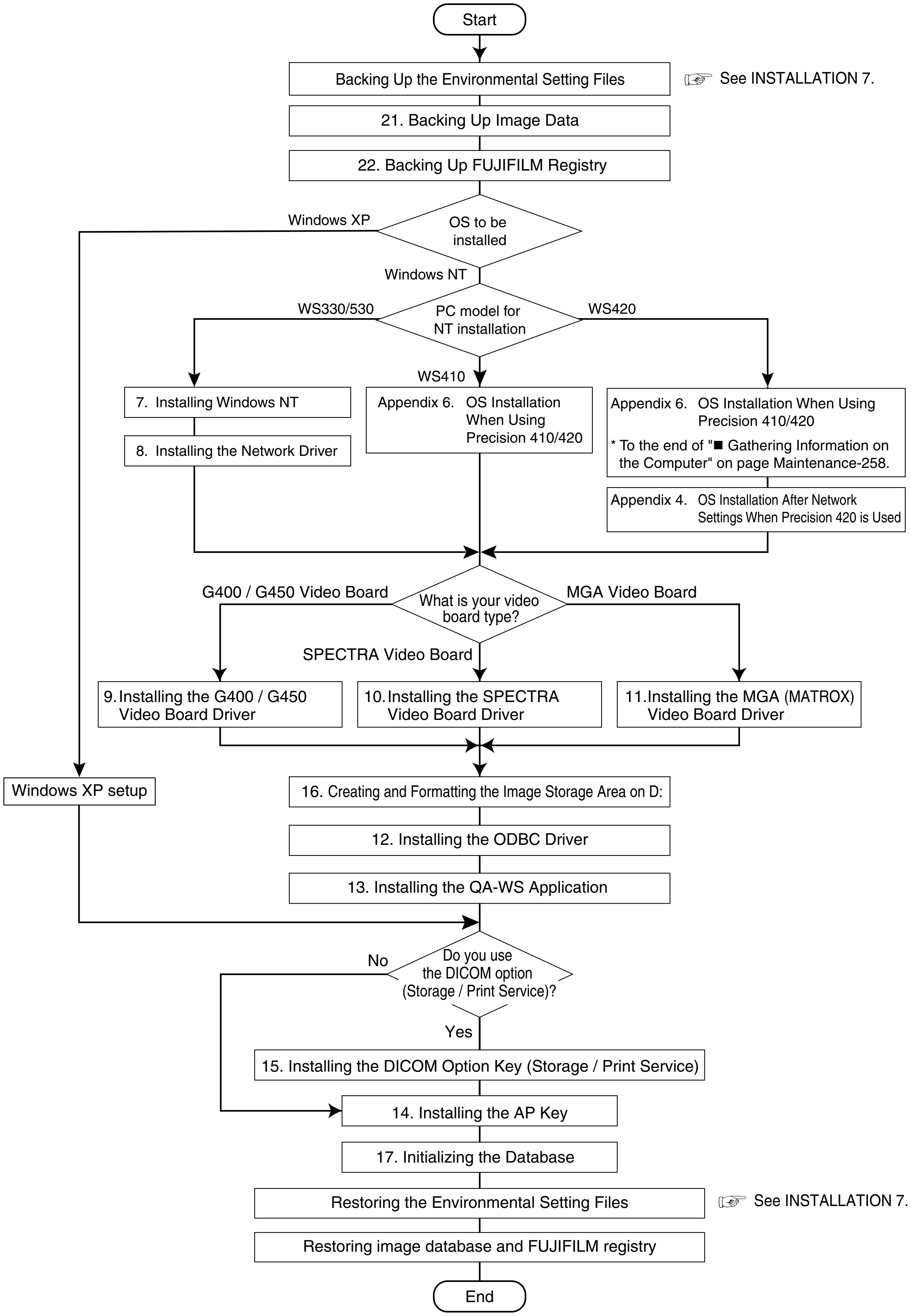
6.2 Parts List


4.1
3.1–3.2
4.2
1.1–1.5
3.3–3.4
1.6–1.8
18
5
6
6
7
8
9.1
10
9.1–9.2
9.2
11–17
19

RANK	REF.	PART NUMBER	PART NAME	QTY	REMARKS	SERIAL NUMBER
C	1.1	113S0166	Board	1	Video Matrox Millennium II (8MB) (PCI bus)	
C	1.2	113Y1414A	Board	1	Video Matrox Millennium II (12MB) (PCI bus)	
C	1.3	113S0163	Board	1	Video Canopus SPECTRA 3200 R2 (PCI bus)	
C	1.4	113S0108	Board	1	Video Matrox Millennium G400 (AGP bus)	
C	1.5	113S0179A	Board	1	Video Matrox Millennium G450 (AGP bus)	
CR	1.6	898Y0790A	Board KIT	1	Monochrome Video Board DVIA01A KIT: 113Y1563E+114Y5393001A05	
C	1.7	113S0193	Landscape board	1	ATI RADEON9000PRO, AGP slot	
C	1.8	113S0204	Landscape board	1	Bloody Monster II GeForce 4, AGP slot	
C	3.1	849N0055	Display	1	MDM-2130 (1K landscape CRT monitor)	
C	3.2	849N0075 +136Y8645	Display+Cable	1	MDM-2135 (FF1) (1K landscape CRT monitor)	
C	3.3	849Y0090	Display	1	Monochrome LCD panel FC-2090 (only for overseas use)	
C	3.4	849S0055	Display	1	Monochrome LCD panel RadiForce G20 (only for overseas use)	
E	4.1	136Y6250	Cable	1	For MDM-2130 CRT monitor	
E	4.2	136Y8645	Cable	1	For MDM-2135 CRT monitor	
E	5.	114Y5457001A	Software	1	Application	
E	6.1	114Y5450099A	Software	1	Video driver	
E	6.2	114Y5393001A	Software	1	DVI01A driver software	
CR	7	113Y1364B	Board	1	ADM01A (Expanding 64MW to QPI01A)	
CR	8	113Y1363C/D	Board	1	Image processing board QPI01A	
CR	9.1	113Y1312D	Board	1	DXA01A (FCR/DMS-I/F)	
CR	9.2	113Y1405B	Board	1	PEI01A (FCR/DMS-I/F)	
E	10	136Y5868A	FCR i/f Cable	1	1.2m adapter cable	
E	11	136Y5869A	FCR i/f Cable	1	5m	
E	12	136Y5870A	FCR i/f Cable	1	15 m (Standard)	
E	13	136Y5871A	FCR i/f Cable	1	30m	
E	14	136Y5872A	FCR i/f Cable	1	45m	
E	15	136Y5873A	FCR i/f Cable	1	60m	
E	16	136Y5874A	FCR i/f Cable	1	100m	
E	17	136Y5875A	FCR i/f Cable	1	150m	
E	18	114Y5450109A	Software	1	Optional display QC software	
D	19	620S0005	Optical instrument	1	Photometer (VeriLUM)	

Installation Flow

When installing the software, follow the procedure below.


Start
Backing Up the Environmental Setting Files
☞ See INSTALLATION 7.
21. Backing Up Image Data
22. Backing Up FUJIFILM Registry
OS to be installed
Windows XP
Windows NT
PC model for NT installation
WS330/530
WS410
WS420
7. Installing Windows NT
8. Installing the Network Driver
Appendix 6. OS Installation When Using Precision 410/420
Appendix 6. OS Installation When Using Precision 410/420
* To the end of "■ Gathering Information on the Computer" on page Maintenance-258.
Appendix 4. OS Installation After Network Settings When Precision 420 is Used
What is your video board type?
G400 / G450 Video Board
SPECTRA Video Board
MGA Video Board
9. Installing the G400 / G450 Video Board Driver
10. Installing the SPECTRA Video Board Driver
11. Installing the MGA (MATROX) Video Board Driver
Windows XP setup
16. Creating and Formatting the Image Storage Area on D:
12. Installing the ODBC Driver
13. Installing the QA-WS Application
Do you use the DICOM option (Storage / Print Service)?
No
Yes
15. Installing the DICOM Option Key (Storage / Print Service)
14. Installing the AP Key
17. Initializing the Database
Restoring the Environmental Setting Files
☞ See INSTALLATION 7.
Restoring image database and FUJIFILM registry
End

7. Installing Windows NT

This section describes the OS (Windows NT) installation procedure to be performed when the Precision WS330 or WS530 (hereinafter referred to as the “WS330/530”). Also, note that the following abbreviations may be used in this section:

- Windows NT .... NT
- Network driver (network adapter) .... ND
- Video board driver (graphic adapter) .... VD
- Application software .... AP

The Windows NT installation procedure is to be performed after hard disk drive (HDD) formatting or replacement. Installing Windows NT deletes all the files related to the network driver (ND), video board driver (VD), and QA-WS application software (AP) from drive C (C:).
Therefore, you must install the ND, VD, and AP after completion of Windows NT installation.

◆◆ *CAUTION* ◆◆

Before installing Windows NT, you must format drives C and D. Formatting these drives delete image data. If it is necessary to back up images in consultation with the user, ask the user to specify the minimum required number of images with a view toward minimizing the space required for image backup.

☞ *“20. Backing Up Images”*

◆ *NOTES* ◆

- *Before installing Windows NT, note down the host name, IP address, subnet mask, and other items of information that are required during OS installation.*
- *Before installing Windows NT, back up the environment setup files.*

☞ *“7. Backing Up the Environmental Setup Files” in the “Installation”*

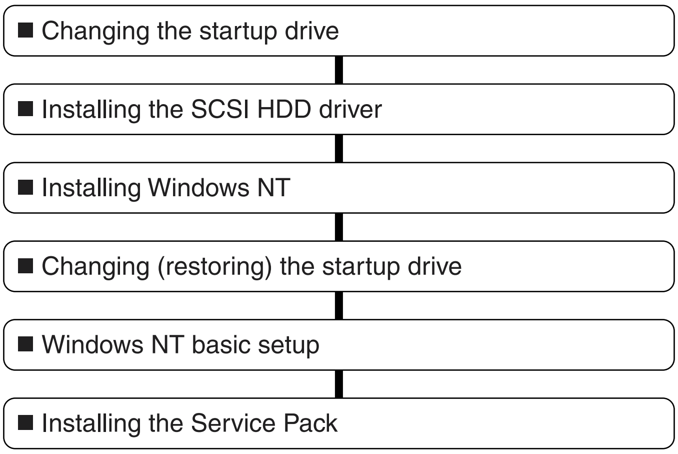
● Have the following ready for use for installation

- Product ID number
  (WS330: Labeled at the bottom of the PC main unit left-hand cover)
  (WS530: Labeled at the front of the PC main unit left-hand cover)
- Windows NT Service Pack5 Disc1 CD-ROM
- OS installation CD-ROM
  (WS330: Dell product recovery CD)
  (WS530: Reinstallation CD NT4)
- VGA monitor (jig)

● Connecting to the VGA monitor (jig)

The regularly used 21" CRT monitor does not support the VGA mode. Therefore, it cannot display relevant information during Windows NT installation and VD installation.
Therefore, the multiscan VGA monitor (having a display resolution of 1600 × 1200 or 1280 × 1024 and a refresh frequency provided by a horizontal frequency of 75 Hz and a vertical frequency of 93 kHz) is furnished as a jig. Connect this jig to the video board connector to which the 21" CRT monitor is currently connected.

● Installation procedure overview


■ Changing the startup drive
■ Installing the SCSI HDD driver
■ Installing Windows NT
■ Changing (restoring) the startup drive
■ Windows NT basic setup
■ Installing the Service Pack

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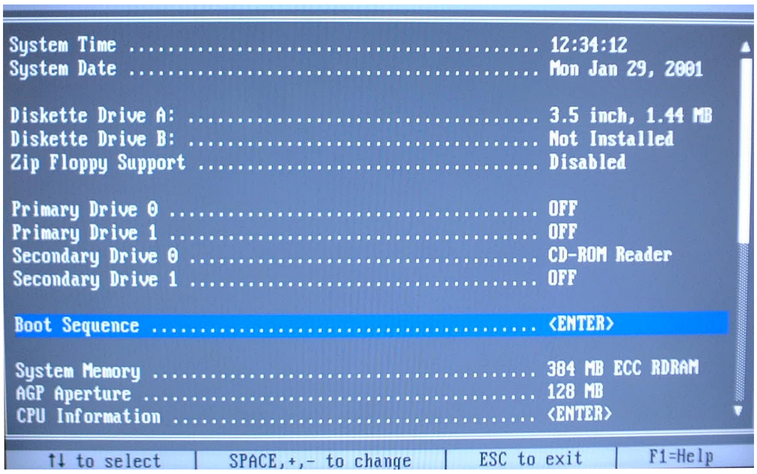
■ Changing the Startup Drive

To start up the NT setup program from the OS installation CD-ROM, change the PC startup drive.
The startup drive can be changed from the BIOS setup screen. The procedure is described below:

(1) Insert the OS installation CD-ROM into the CD-ROM drive and then turn ON the PC.
➔ After a while, the PC startup screen opens.

(2) When the upper right corner of the startup screen reads “F2=Setup”, press the <F2> key.
➔ The BIOS setup screen then opens.

(3) Use the <↑> or <↓> key to choose “Boot Sequence”, and then press the <Enter> key.



```
System Time ........................................ 12:34:12
System Date ........................................ Mon Jan 29, 2001

Diskette Drive A: .................................. 3.5 inch, 1.44 MB
Diskette Drive B: .................................. Not Installed
Zip Floppy Support ................................. Disabled

Primary Drive 0 .................................... OFF
Primary Drive 1 .................................... OFF
Secondary Drive 0 .................................. CD-ROM Reader
Secondary Drive 1 .................................. OFF

Boot Sequence ...................................... <ENTER>

System Memory ...................................... 384 MB ECC RDRAM
AGP Aperture ....................................... 128 MB
CPU Information .................................... <ENTER>

 ↑↓ to select | SPACE,+,- to change | ESC to exit | F1=Help
```

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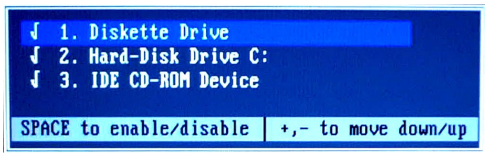
(4) Use the <↑> or <↓> key to select “1. Diskette Drive” and “2. Hard-Disk Drive C:”. Press the <Space> key for each selected option.



```
 √ 1. Diskette Drive
 √ 2. Hard-Disk Drive C:
 √ 3. IDE CD-ROM Device

SPACE to enable/disable | +,- to move down/up
```

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➔ The check mark then disappears from “1. Diskette Drive” and “2. Hard-Disk Drive C:”. As a result, only the “3. IDE CD-ROM Device” option is checked (selected).

(5) Return to the BIOS setup screen by pressing the <Enter> key, and then press the <Esc> key.
➔ A message appears, asking whether you want to save the BIOS setup changes.

(6) Verify that “Save Changes and Exit” is chosen, and then press the <Enter> key.
➔ The PC restarts.

■ Installing the SCSI HDD Driver

Since the WS330/530 incorporates a SCSI HDD, it needs the driver for the SCSI HDD.
Before installing Windows NT, you must install the SCSI HDD driver software by performing the procedure described below:

(1) When the message "Setup is inspecting your computer's hardware configuration..." appears during the PC startup sequence, press the <F6> key several times.
➔ The screen for large-capacity storage SCSI adapter (SCSI HDD driver) selection appears.

(2) Press the <S> key to load the information about SCSI HDD drivers.
➔ A list of drivers appears.

(3) Since you are supposed to use a driver that is not listed, press the <↑> or <↓> key to choose "Other" and then press the <Enter> key.
➔ A screen opens to prompt for FD insertion.

(4) Insert the WS330/530 SCSI HDD driver software FD into the FDD, and then press the <Enter> key.
➔ A driver selection screen opens.

(5) Select the driver you are going to use, and then press the <Enter> key.
- Driver for the WS330
  “Adaptec Ultra160/n Family PCI SCSI Controller(NT4.0)”
- Driver for the WS530
  “Adaptec Ultra160 Family PCI SCSI Controller(NT4.0)”

➔ A confirmation screen for driver loading opens.

(6) Press the <Enter> key.
➔ The driver loading process starts.
Upon completion of driver loading, the "Welcome to Setup" screen opens.

■ Installing Windows NT

(1) While the “Welcome to Setup” screen is open, press the <Enter> key.
➔ The setup process starts.
The large-capacity storage detection sequence is then automatically performed to display the detailed information about a detected storage device.

(2) Press the <Enter> to continue with the setup process.
➔ The notes on the HD specifications appear.

(3) Press the <Enter> key.
➔ The "Windows NT License Agreement" screen opens.

(4) Press the <Page Down> key as needed to scroll to the bottom of the screen, and then press the <F8> key.

(5) Since you are supposed to perform a clean install of Windows NT, press the <N> key.

◆ NOTE ◆

The screen displayed in step 5 above opens only when Windows NT is already installed. Just proceed to perform step 6.

☞ *A list of detected software/hardware appears.*

(6) Verify the contents of the screen, and then press the <Enter> key.
If the contents of the screen are wrong, follow the on-screen instructions to correct them.
➔ A list of predefined partitions appears.

◆ NOTE ◆

Since you are going to perform a clean install of Windows NT, delete all the default partitions.

(7) Select a partition to be deleted, and then press the <D> key.

◆ NOTE ◆

When you attempt to delete the system partition (on which Window NT is installed), a confirmation screen opens, asking whether you really want to delete such a partition. When such a screen opens, press the <Enter> key.

➔ A confirmation screen opens asking if you want to delete the partition.

(8) Verify the partition to be deleted, and then press the <L> key.
➔ Upon partition deletion, the partition list opens again.

(9) Repeat steps 7 and 8 as needed to delete all the remaining partitions.
➔ The partition list simply reads “Unpartitioned space: XXXX”.

(10) To create the system partition (partition on which you are going to install Windows NT), move the cursor to “Unpartitioned space: XXXX” and then press the <C> key.
➔ The partition size input screen opens.

(11) Use the <Backspace> key to clear the default value, type in “1024” as the system partition size, and then press the <Enter> key.

➥ REFERENCE

To use the numeric keypad, enable it by pressing the <Num Lock> key.

➔ The Windows NT installation partition selection screen opens.

(12) Move the cursor to “C: New (Unformatted)” and then press the <Enter> key.
➔ The file system selection screen opens.

(13) Move the cursor to “Format the partition using the NTFS file system” and then press the <Enter> key.
➔ Formatting starts using the NTFS file system.
Upon completion of formatting, the Windows NT installation folder selection screen opens.

(14) Verify that the Windows NT installation destination is “\WINNT”, and then press the <Enter> key.
➔ The HDD secondary inspection confirmation screen opens.

(15) Press the <Enter> key to start the secondary inspection.
➔ A screen opens to indicate that the secondary inspection is in progress.
Upon completion of inspection, a screen opens to indicate that the setup process has ended normally.

(16) Remove the SCSI HDD driver software floppy disk and then press the <Enter> key.

◆ NOTE ◆

At this stage, leave the OS installation CD-ROM in its drive.

➔ The PC restarts.

■ Changing (Restoring) the Startup Drive

Since the PC startup drive was changed to the CD-ROM drive before Windows NT installation, you must switch from the CD-ROM startup mode to the HDD startup mode. The procedure is described below:

(1) When the upper right corner of the startup screen reads “F2=Setup”, press the <F2> key.
➔ The BIOS setup screen then opens.

(2) Use the <↑> or <↓> key to choose “Boot Sequence”, and then press the <Enter> key.

(3) Use the <↑> or <↓> key to select “1. Diskette Drive” and “2. Hard-Disk Drive C:”. Press the <Space> key for each selected option.
➔ The “1. Diskette Drive” and “2. Hard-Disk Drive C:” options are then checked.

(4) Return to the BIOS setup screen by pressing the <Enter> key, and then press the <Esc> key.
➔ A message appears, asking whether you want to save the BIOS setup changes.

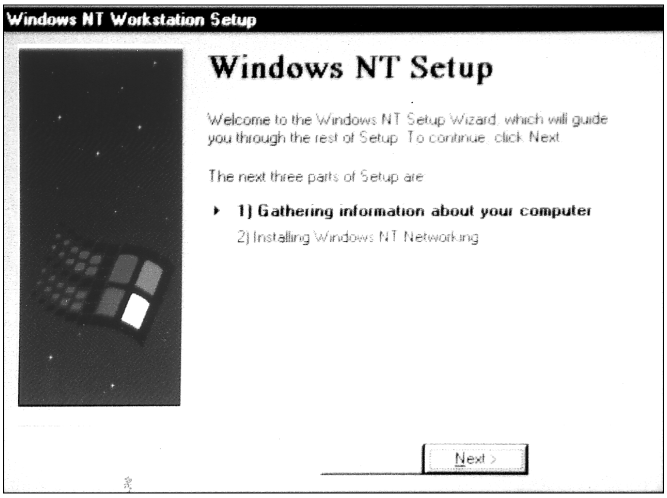
(5) Verify that "Save Changes and Exit" is chosen, and then press the <Enter> key.
➔ The PC restarts. When the PC is restarted, the “Windows NT Setup” screen opens.

➥ ***REFERENCE***

In this instance, the PC restarts using the FAT file system and then automatically restarts again using the NTFS file system (the PC restarts two times in succession).

■ Windows NT Basic Setup

(1) While the “Windows NT Setup” screen is displayed, click Next >.



Windows NT Workstation Setup

Windows NT Setup

Welcome to the Windows NT Setup Wizard, which will guide you through the rest of Setup. To continue, click Next.

The next three parts of Setup are:

- 1) Gathering information about your computer
- 2) Installing Windows NT Networking

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➔ The “Setup Options” screen then opens.

(2) Verify that the “● Typical” option is selected, and then click Next >.

➔ The “Name and Organization” screen opens.

(3) Enter “QA-WS” in the name field and “FUJIFILM” in the organization name field, and then click Next >.

➔ The “Registration” screen opens.

(4) Enter the product ID in the “Product ID” field, and then click Next >.

➥ REFERENCE

The product ID label it attached to the PC main unit cover.

➔ The “Computer Name” screen opens.

(5) Enter the host name (e.g., QAWS1) in the “Computer Name” field and then click Next >.

◆ NOTE ◆

The entire host name entry is displayed in upper case no matter whether you enter upper-case or lower-case characters.

➔ The “Administrator Account” screen opens.

(6) Enter “fieldengineer” in the “Password” field, and then enter the same character string (fieldengineer) in the “Confirm Password” field. Click Next >.

◆◆ CAUTIONS ◆◆

- *All the password character entries appear as asterisks (*************).*
- *If the character string entered in the “Password” field is not properly entered in the “Confirm Password” field, you cannot proceed to the next step.*
- *The entered password must be properly managed so that it will not be used by irrelevant persons.*

➔ The “Emergency Repair Disk” screen opens.

(7) Since the emergency repair disk is not to be created, choose "● No." and then click [Next >].

➔ The "Windows NT Components" screen opens.

(8) Verify that the "● Install the most common components (recommended)" option is chosen, and then click [Next >].

➔ The "Windows NT Setup" screen opens.

(9) Click [Next >].

➔ The message "Windows NT needs to know how this computer should participate on a network." appears.

(10) Choose "● Do not connect this computer to a network at this time." and then click [Next >].

➔ The message "Setup is almost finished." appears.

(11) Click [Finish].

➔ The "Date/Time Properties" screen opens.

(12) Check that the time zone and date/time are correct, and then click [Close].

◆ NOTE ◆

When the "Date/Time Properties" screen opens, it initially indicates a time zone. To confirm the date/time, click the "Date & Time" tab.

➔ The "Detected Display" screen opens.

(13) Confirm the detected graphic adapter and then click [OK].

◆ NOTE ◆

Since the VD is to be installed after completion of Windows NT installation, you are not supposed to perform detailed VD setup here.

➔ The "Display Properties" screen opens.

(14) Click [Test] to check whether the current display settings properly work.

➔ A message appears to indicate that a five-second display test will be conducted.

(15) Click [OK].

➔ The display shows a test bitmap for five seconds.

Red	Red Gradient
Green	Green Gradient
Blue	Blue Gradient
Yellow	Thin horizontal lines
Magenta	Thin vertical lines
Cyan	Gray Gradient

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A message appears five seconds later, asking whether the bitmap is correctly displayed.

(16) Click Yes.

➔ A message appears, asking whether you want to save the tested display settings.

(17) Click OK to save the tested display settings.

➔ The “Display Properties” screen opens.

(18) Click OK in the “Display Properties” screen.

➔ The “Display Properties” screen closes, and the files stored on the CD-ROM are copied to the HD. When the copy process ends, a screen opens, prompting you to restart the PC.

(19) Remove the CD-ROM and then click Restart Computer.

➔ The PC restarts. When the PC is restarted, the OS selection screen opens.

(20) Verify that “Windows NT Workstation 4.00” is selected, and then press the <Enter> key.

➥ *REFERENCE*

To log onto Windows NT as the Administrator, do not change the “User Name (U):” leaving tit as is the default (“Administrator”).

➔ The “Begin Logon” screen opens.

(21) To log onto Windows NT, simultaneously press the <Ctrl>, <Alt>, and <Delete> keys.

➔ The “Logon Information” screen opens.

(22) Enter “fieldengineer” as the password, and then click OK.

◆◆ *CAUTION* ◆◆

To log onto Windows NT as the Administrator, do not change the “User Name (U):” leaving it as is the default (“Administrator”).

➔ When you successfully log onto Windows NT, the "Welcome to Windows NT" screen opens.

(23) Click Close.

■ Setting Up Virtual Memory

Set up virtual memory for the PC as described below.

(1) Right-click [My Computer] on the desktop and select [Properties].
➔ The “System Properties” window opens.

(2) Select the [Performance] tab and click [Change] of "Virtual Memory".
➔ The “Virtual Memory” window opens.

(3) Select the [C drive]. Set up the [Initial Size] and [Maximum Size] as follows and then click [OK].

- Initial size (MB) = Real memory size+11
- Maximum size (MB) = Initial size+50

➔ The “System Properties” window opens.

(4) Click [OK].
➔ The PC restarts.
This completes the virtual memory setup procedure.

■ Installing the Service Pack

The procedure for installing Windows NT Service Pack5 is described below:

(1) Insert Windows NT Service Pack5 Disk1 into the CD-ROM drive.
➔ After a while, the "Microsoft Windows NT 4.0 Service Pack5" screen opens.

(2) Scroll the screen until Install Service Pack 5 appears.

(3) Click Install Service Pack 5.
➔ A screen opens, prompting you to select the service pack you want to install.

(4) Click Install Service Pack 5 (Intel version).
➔ The file processing method selection screen opens.

(5) Choose ● Open and then click OK.
➔ The security notice screen opens.

(6) Click Yes.
➔ The Software License Agreement screen opens.

(7) Complete the following steps:
- Check ☐ Accept the License Agreement (☐ ➔ ☑).
- Uncheck ☑ Backup files necessary to uninstall approximately 60MB additional disk (☑ ➔ ☐).

(8) Click Install.
➔ The installation starts.
Upon completion of installation, you are prompted to restart the PC.

(9) Click Restart.
➔ The PC restarts.

(10) Log onto NT by entering "Administrator" as the user name and "fieldengineer" as the password.
➔ The "Welcome to Windows NT" screen opens

(11) Uncheck ☐ Show this Welcome Screen next time you start Windows NT (☑ ➔ ☐), and then click Close.
➔ The Windows NT main screen opens.

(12) Remove Windows NT Service Pack5 Disk1 from the CD-ROM drive.

Next ▶▶
"8. Installing the Network Driver"

8. Installing the Network Driver

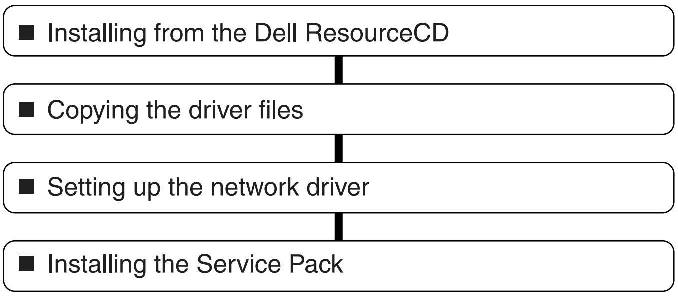
This section describes the network driver installation procedure to be completed for the use of the Precision WS330 or WS530 (hereinafter referred to as the “WS330/530”). Also, note that the following abbreviations may be used in this section:

- Windows NT .... NT
- Network driver (network adapter) .... ND
- Video board driver (graphic adapter) .... VD
- Application software .... AP

● Have the following ready for use for installation.

- OS installation CD-ROM
  (WS330: Dell product recovery CD)
  (WS530: Reinstallation CD NT4)
- Windows NT Service Pack5 Disc1 CD-ROM
- Dell Precision ResourceCD CD-ROM
- VGA monitor (jig)

● Installation procedure overview


■ Installing from the Dell ResourceCD
■ Copying the driver files
■ Setting up the network driver
■ Installing the Service Pack

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■ Installing from the Dell ResourceCD

To copy the driver files from the Dell ResourceCD to the HD, install Dell Accessories (utility software) from the Dell ResourceCD as directed below:

(1) Insert the Dell ResourceCD into the CD-ROM drive.
➔ After a while, the "ResourceCD Installation" screen opens.

◆ *NOTE* ◆

The contents of the "ResourceCD Installation" screen are displayed in English when the WS330 is used and in Japanese when the WS530 is used.

(2) Click OK.
➔ The "Welcome to the InstallShield Wizard for Dell Resource CD" screen opens.

(3) Click Next >.
➔ Upon completion of installation, a screen opens to indicate that the installation is completed.

(4) Verify that ○ Yes, I want to restart my computer now. is chosen, and then click Finish.
➔ The PC restarts.
After the PC is restarted, the message "Please select the operating system to start:" appears.

(5) Select "Windows NT Workstation Version 4.00" and then press the <Enter> key.
➔ The "Begin Logon" screen opens.

(6) To log onto Windows NT, simultaneously press the <Ctrl>, <Alt>, and <Delete> keys.
➔ The "Logon Information" screen opens.

(7) Enter "fieldengineer" as the password, and then click OK.
➔ The Windows NT main screen opens.

◆◆ *CAUTION* ◆◆

To log onto Windows NT as the Administrator, do not change the "User Name (U):" leaving it as is the default ("Administrator").

■ Copying the Driver Files

Copy the network driver (ND) files from the Dell ResourceCD to the HD by performing the following steps:

◆ NOTE ◆

Dell may change the driver file directory path without prior notice. If the driver file directory path is changed, call or otherwise contact Dell's technical support.

☞ "(1) Technical Support" under "How to Use This Manual"

(1) Click Start , point to "Dell Accessories", and click "Dell ResourceCD".

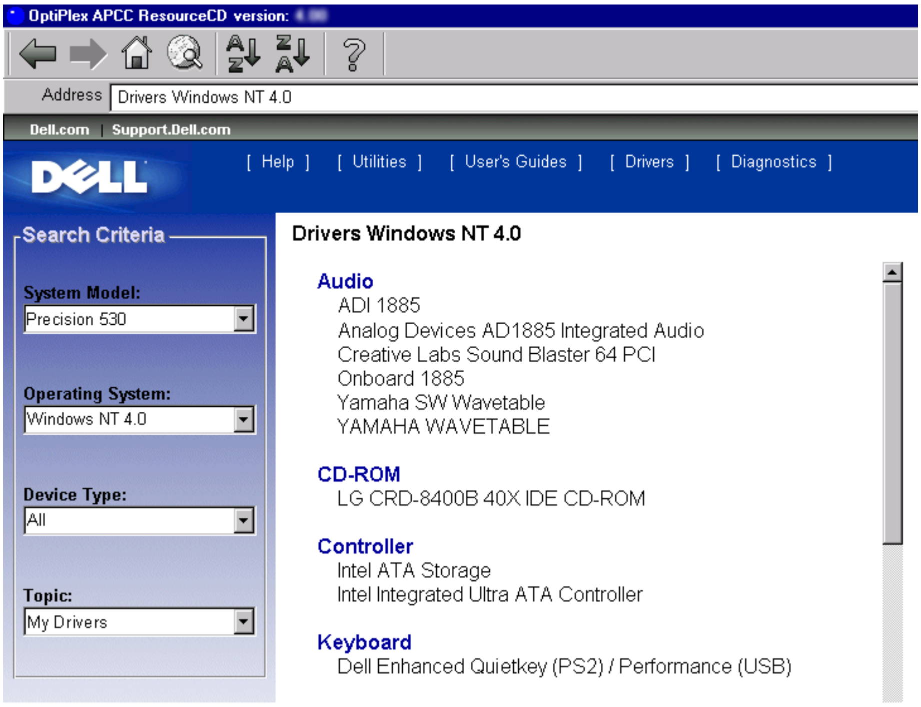
➔ The "Precision APCC ResourceCD..." screen opens.

(2) Click Next .

➔ "My Drivers" opens.

(3) Check that the following settings are used:

- System model = Precision 330 or Precision 530
- Operating system = Windows NT
- Device type = All
- Topic = My Drivers



OptiPlex APCC ResourceCD version:

Address: Drivers Windows NT 4.0

Dell.com | Support.Dell.com
[Help] [Utilities] [User's Guides] [Drivers] [Diagnostics]
DELL

Search Criteria

System Model: Precision 530

Operating System: Windows NT 4.0

Device Type: All

Topic: My Drivers

Drivers Windows NT 4.0

Audio
ADI 1885
Analog Devices AD1885 Integrated Audio
Creative Labs Sound Blaster 64 PCI
Onboard 1885
Yamaha SW Wavetable
YAMAHA WAVETABLE

CD-ROM
LG CRD-8400B 40X IDE CD-ROM

Controller
Intel ATA Storage
Intel Integrated Ultra ATA Controller

Keyboard
Dell Enhanced Quietkey (PS2) / Performance (USB)

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◆ NOTE ◆

The window shown above opens when WS330 is used.

(4) Under "Network", click the following target driver:

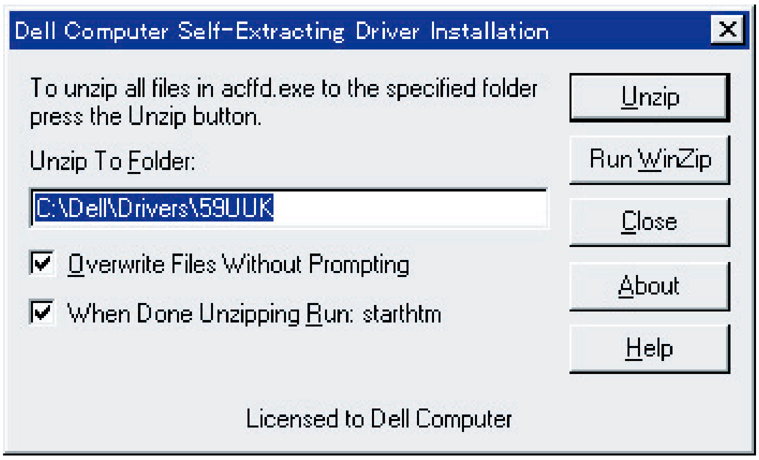
- WS330: "3COM EtherLink 5"
- WS530: "3COM NIC"

➔ "WinZip Self-Extractor" opens.

(5) Click OK to unzip files.

➔ The “Dell Computer Self-Extracting Driver Installation” screen opens.

(6) Click Unzip.



To unzip all files in acffd.exe to the specified folder press the Unzip button.

Unzip To Folder: C:\Dell\Drivers\59UUK

☑ Overwrite Files Without Prompting

☑ When Done Unzipping Run: starthtm

Licensed to Dell Computer

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◆ NOTE ◆

The above screen opens when the WS330 is used.
If the WS530 is used, the name of the files to be unzipped and the name of the unzipping destination folder differ from those indicated above.

➔ A screen opens to indicate that the files are completely unzipped.

(7) Click OK.

➔ The Internet Explorer screen opens.

(8) Click ☒ at the upper right corner of the screen.

➔ You are then returned to the “Precision APCC ResourceCD...” screen.

(9) Click ☒ at the upper right corner of the screen.

(10) Remove the Dell ResourceCD from the CD-ROM drive.

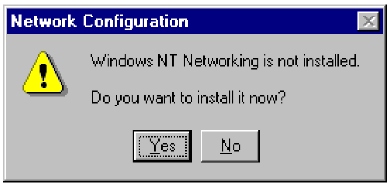
■ Setting Up the Network Driver

(1) Insert the OS installation CD-ROM into the CD-ROM drive.
➔ The “Windows NT CD-ROM” screen opens.

(2) Click ☒ at the upper right corner of the screen.
➔ The “Windows NT CD-ROM” screen shuts down.

(3) Right-click “Network Neighborhood” on the desktop, and then choose Properties.
➔ The “Network Configuration” screen opens.

(4) Click Yes.



Network Configuration

Windows NT Networking is not installed.

Do you want to install it now?

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➔ The "Network Setup Wizard" screen opens.

(5) Check ☑ Wired to the network and then click Next >.
➔ The network adapter selection screen opens.

(6) Click Start Search.
➔ The "Select Network Adapter" screen opens.

(7) Click Have Disk....
➔ The message "Insert Disk" appears.

(8) Enter the path to the directory in which the network adapter driver exists (the path specified in step 6), and then click OK.

◆ *NOTE* ◆

For the WS330, enter “C:\Dell\Drivers\59uuk” as the directory path. For the WS530, enter “C:\Dell\Drivers\1934V”.

➔ The “Select OEM Option” screen opens.

(9) Verify that the network adapter is displayed, and then click OK.
➔ You are then returned to the “Network Setup Wizard” screen.

(10) Check ☑ 3Com EtherLink PCI NIC and then click Next >.
➔ The “Network Protocols” screen opens.

(11) Verify that ☑ TCP/IP Protocol is checked, and then click Next >.
➔ The “Network Services”screen opens.

(12) Verify that ☑ RPC Configuration is selected, and then click Next >.
➔ A screen opens, prompting you to confirm the network component installation.

(13) Click Next >.
➔ The “Windows NT Setup” screen opens.

(14) Enter D:\I386 (when drive D is the CD-ROM drive) and then click Continue.
➔ The necessary files begin to be copied.
After a while, the screen concerning the use of the DHCP opens.

(15) Click No.
➔ The “Microsoft TCP/IP Properties” screen opens.

(16) Make the following entries:

- IP Address: : Enter the IP address (e.g., 2222.222.222.4).
- Subnet Mask: : Enter the subnet mask (e.g., 255.255.255.0).

(17) Click OK.
➔ The “Show Bindings for:” screen opens.

(18) Click Next >.
➔ A screen opens, prompting you to confirm if your computer will be participating in a workgroup.”

(19) Click Next >.
➔ The network selection screen opens.

(20) Verify that the host name is entered in the Computer Name: field, and then click Next >.
➔ A screen opens to indicate the installation is completed.

(21) Click Finish.
➔ The “Network Settings Change” screen opens.

(22) Remove the OS installation CD-ROM from the CD-ROM drive.

(23) Click Yes.
➔ The computer restarts.

(24) Log onto NT by entering “Administrator” as the user name and “fieldengineer” as the password.
➔ The “Service Control Manager” screen opens.

(25) Click OK.
➔ The Windows NT main screen opens.

■ Installing the Service Pack

After completion of network driver installation, it is necessary to reinstall the Service Pack.
To install Windows NT Service Pack5, perform the following steps:

(1) Insert Windows NT Service Pack5 Disk1 into the CD-ROM drive.
➔ After a while, the “Microsoft Windows NT 4.0 Service Pack5” screen opens.

(2) Scroll the screen until Install Service Pack 5 appears.

(3) Click Install Service Pack 5.
➔ A screen opens, prompting you to select the Service Pack you want to install.

(4) Click Install Service Pack 5 (Intel version).
➔ The file processing method selection screen opens.

(5) Choose ● Open and then click OK.
➔ The Software License Agreement screen opens.

(6) Complete the following steps:
- Check ☐ Accept the License Agreement (☐ ➔ ☑).
- Uncheck ☑ Backup files necessary to uninstall approximately 60MB additional disk (☑ ➔ ☐).

(7) Click Install.
➔ The installation starts.
Upon completion of installation, you are prompted to restart the PC.

(8) Click Restart.
➔ The PC restarts.

(9) Log onto NT by entering “Administrator” as the user name and “fieldengineer” as the password.
➔ The Windows NT main screen opens.

(10) Remove Windows NT Service Pack5 Disk1 from the CD-ROM drive.

Next ▶▶
“10. Installing the G400/G450 Video Board Driver”

9. Installing the G400/G450 Video Board Driver

Described herein is the Matrox Millennium G400 (hereinafter referred to as “G400”) or Matrox Millennium G450 (“G450”) video board driver installation procedure.

☞ This chapter describes the installation procedure assuming that a CRT is used. When an LCD (SL-IC300) is used, see the following.

➔ "6. Installing the DVI01A/C Board Driver (A03 or Later)" and "7. Setting the Display Properties" of the "Super Resolution LCD Monitor SL-IC300 Service Manual"

● Have the following ready for use for installation.

- Matrox Millennium G400 or G450 CD-ROM

■ Driver installation

(1) Insert the “Matrox Millennium G400 (G450) CD-ROM” into the CD-ROM drive.

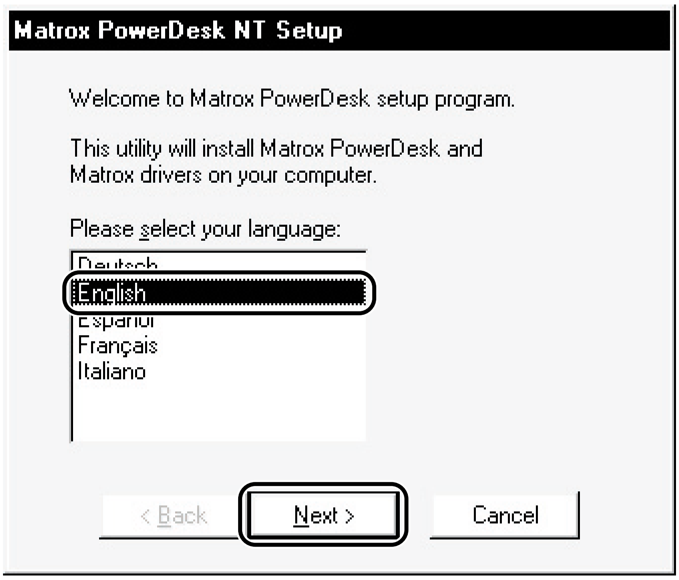
(2) Sequentially double-click My Computer, (E:), WinNT and Setup.exe.

◆ *NOTE* ◆

The icon name of “WinNT” is only for G400, while “WinNT40” is for G450.

➔ The setup program starts up.

(3) Select a language you wish to use and click Next >.



Matrox PowerDesk NT Setup

Welcome to Matrox PowerDesk setup program.

This utility will install Matrox PowerDesk and Matrox drivers on your computer.

Please select your language:

Deutsch
English
Español
Français
Italiano

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◆ *NOTE* ◆

The window shown above is for G400.
For G450, the larger number of languages are available.

➔ The "Please select the type of installation you want." window opens.

(4) Click .

➔ Installation begins.

After completing installation, the installation completion window opens.

(5) Click .

(6) Remove the video board driver CD-ROM from the CD-ROM drive.

(7) Click .

➔ The main controller unit will restart.

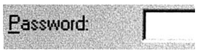
After the main controller has restarted, the “Please select the operating system to start:” window opens.

(8) Make sure that “Windows NT Workstation 4.00” has been selected and press the <Enter> key.

➔ The “Begin Logon” window opens.

(9) To log onto Windows NT, press the <Ctrl>, <Alt> and <Delete> keys all together.

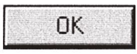
➔ The “Logon Information” window opens.

(10) Enter the password (“fieldengineer”) in  and click .

◆◆ CAUTION ◆◆

To log onto WindowsNT as the Administrator, do not change the “User Name (U):” leaving it as is the default (“Administrator”).

➔ After logging on WindowsNT, the "Invalid Display Settings" window opens.

(11) Click .

➥ REFERENCE

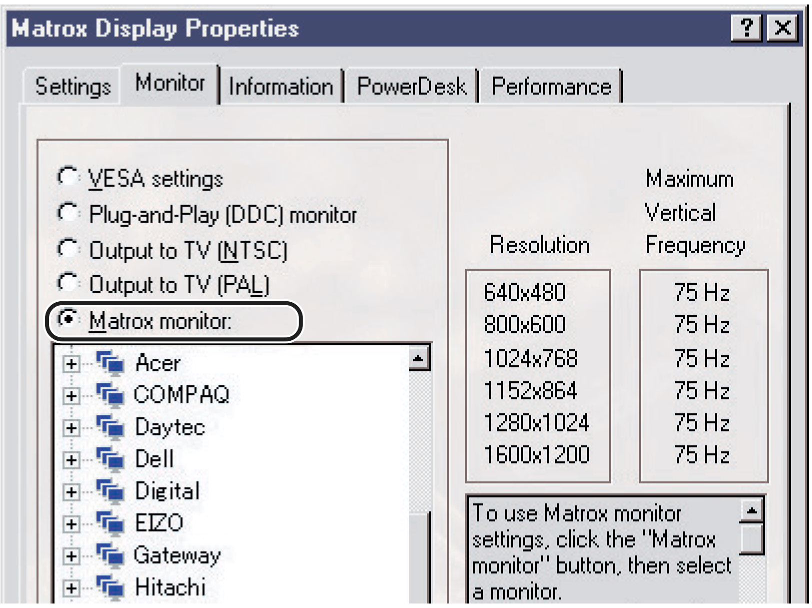
If the “Registry Information” screen is displayed, click the “Don’t show this message again” check box and then the “Don’t Register” check box. If the “Registry Information “ screen is still displayed, click [OK].

■ Resolution setup

(1) From the Start menu, sequentially select “Programs”, “Matrox PowerDesk NT” and “Matrox Display Properties”.

➔ The “Matrox Display Properties” dialog box opens.

(2) Click the Monitor tab and select ● Matrox monitor: .


Matrox Display Properties
? ×
Settings
Monitor
Information
PowerDesk
Performance
○ VESA settings
○ Plug-and-Play (DDC) monitor
○ Output to TV (NTSC)
○ Output to TV (PAL)
● Matrox monitor:
Acer
COMPAQ
Daytec
Dell
Digital
EIZO
Gateway
Hitachi

Resolution	Maximum Vertical Frequency
640x480	75 Hz
800x600	75 Hz
1024x768	75 Hz
1152x864	75 Hz
1280x1024	75 Hz
1600x1200	75 Hz

To use Matrox monitor settings, click the "Matrox monitor" button, then select a monitor.

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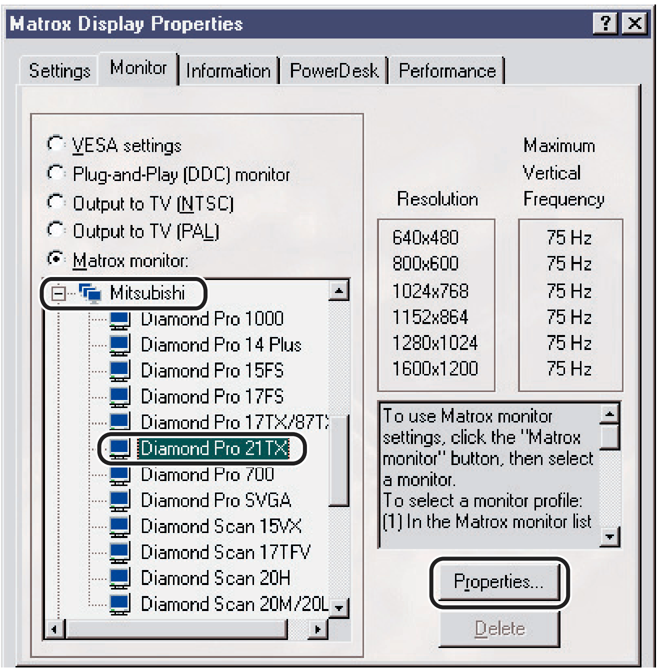
(3) Click [+] in ⊞ Mitsubishi of the list box.

(4) Select Diamond Pro 21TX and click Properties... .


Matrox Display Properties
? ×
Settings
Monitor
Information
PowerDesk
Performance
○ VESA settings
○ Plug-and-Play (DDC) monitor
○ Output to TV (NTSC)
○ Output to TV (PAL)
● Matrox monitor:
Mitsubishi
Diamond Pro 1000
Diamond Pro 14 Plus
Diamond Pro 15FS
Diamond Pro 17FS
Diamond Pro 17TX/87T
Diamond Pro 21TX
Diamond Pro 700
Diamond Pro SVGA
Diamond Scan 15VX
Diamond Scan 17TFV
Diamond Scan 20H
Diamond Scan 20M/20L
Properties...
Delete

Resolution	Maximum Vertical Frequency
640x480	75 Hz
800x600	75 Hz
1024x768	75 Hz
1152x864	75 Hz
1280x1024	75 Hz
1600x1200	75 Hz

To use Matrox monitor settings, click the "Matrox monitor" button, then select a monitor.
To select a monitor profile:
(1) In the Matrox monitor list

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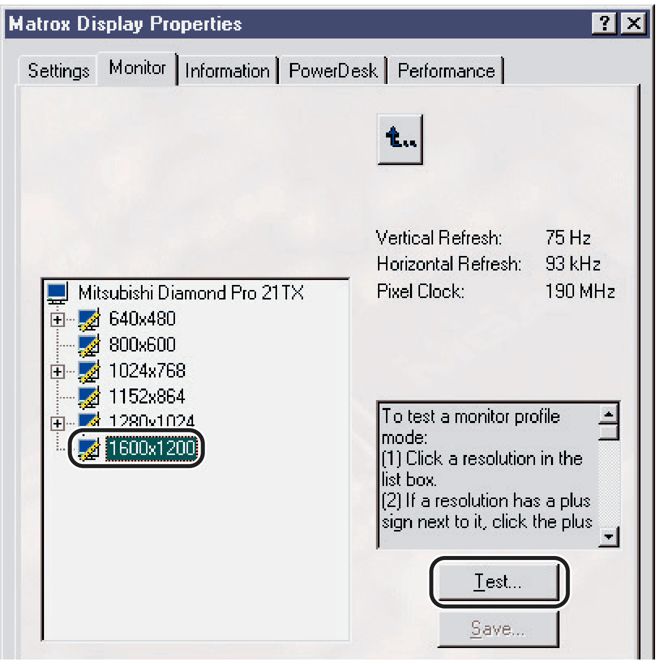
(5) Select 1600x1200 and click Test... .


Matrox Display Properties
Settings
Monitor
Information
PowerDesk
Performance
Mitsubishi Diamond Pro 21TX
640x480
800x600
1024x768
1152x864
1280x1024
1600x1200
Test...
Save...

Vertical Refresh: 75 Hz
Horizontal Refresh: 93 kHz
Pixel Clock: 190 MHz

To test a monitor profile mode:
(1) Click a resolution in the list box.
(2) If a resolution has a plus sign next to it, click the plus

FTHF0611.EPS

➔ The “Matrox Monitor (M)” window opens.

(6) Click OK.

➔ The “Matrox Power Desk” window opens.

(7) Click Yes.

➔ The “Matrox Monitor (M)” window opens.

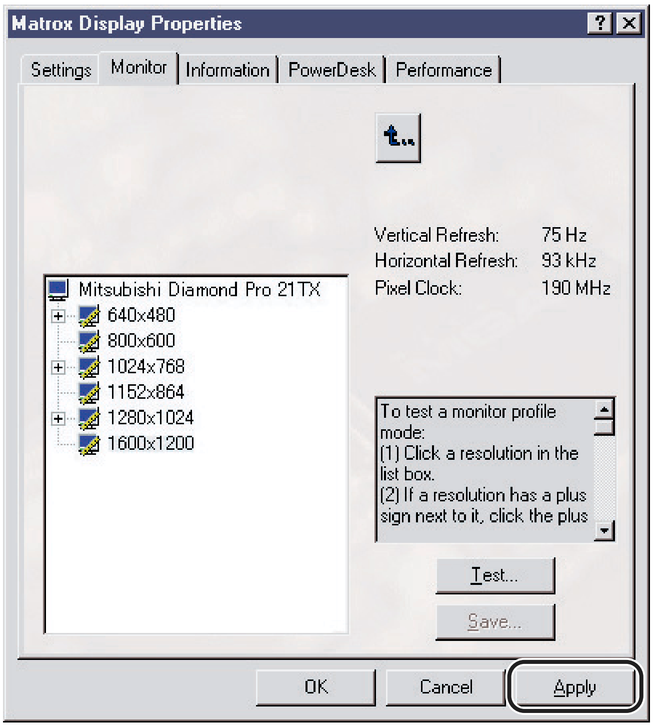
(8) Click OK.

➔ The “Matrox Monitor Test Control” window opens.

(9) Click OK.

➔ The system returns to the “Matrox Display Properties” dialog box.

(10) Click Apply.


Matrox Display Properties
?
Settings
Monitor
Information
PowerDesk
Performance
Test...
Save...
OK
Cancel
Apply

Mitsubishi Diamond Pro 21TX
- 640x480
- 800x600
- 1024x768
- 1152x864
- 1280x1024
- 1600x1200

Vertical Refresh: 75 Hz
Horizontal Refresh: 93 kHz
Pixel Clock: 190 MHz

To test a monitor profile mode:
(1) Click a resolution in the list box.
(2) If a resolution has a plus sign next to it, click the plus

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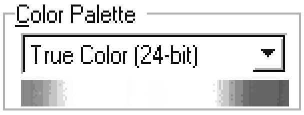
➔ The “Matrox Monitor Selection” window opens.

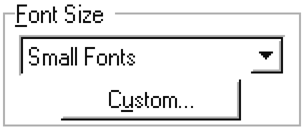
(11) Click OK.
➔ The “Monitor Setting” window opens.

(12) Click Yes.
➔ The system returns to the “Matrox Display Properties” dialog box.

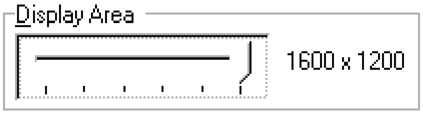
(13) Click the Settings tab.

(14) Set the monitor as follows and click Apply.

- 
Color Palette
True Color (24-bit)
(Color Palette: True Color (24bit))

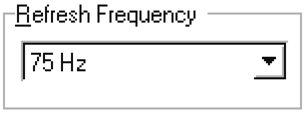
- 
Font Size
Small Fonts

(Font Size: Small Fonts)

- 
Display Area
1600 x 1200
(Display Area: 1600×1200 or 1280×1024 Pixels)

◆ NOTE ◆

Set the display area either to 1600×1200 or 1280×1024 pixels, in accordance with the maximum resolution of the jig monitor.
Nothing will be displayed on the jig monitor if resolution exceeding the maximum value has been set for it. In such an instance, remove the jig monitor and connect another that is suitable for the preset maximum resolution.

- 
Refresh Frequency
75 Hz
(Refresh Frequency: 75Hz)

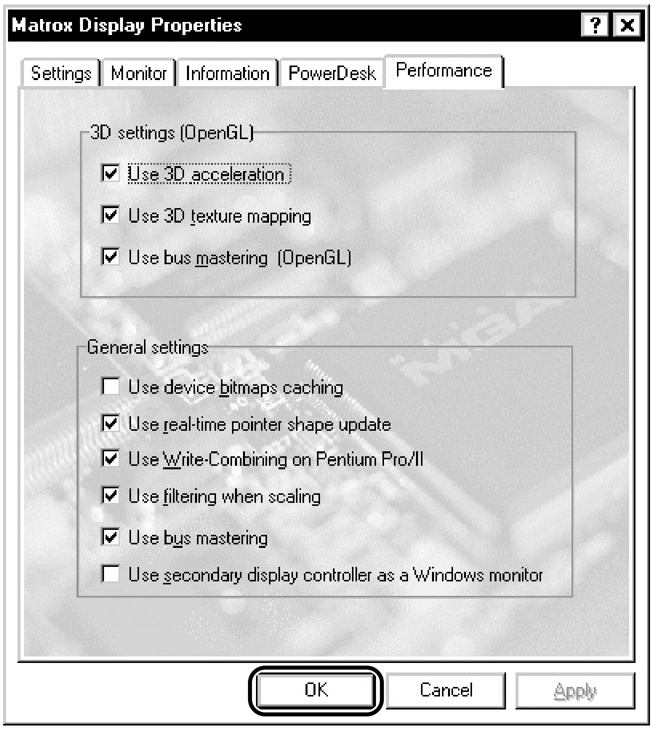
➔ The window properties appear.

(15) Click OK.
➔ The “Monitor Settings” window opens.

(16) Click Yes.
➔ The system returns to the “Matrox Display Properties” dialog box.

(17) Click the Performance tab.

(18) Deselect (☑ ➔ ☐) ☐ Use device bitmaps caching and click OK.



Matrox Display Properties

3D settings (OpenGL)

☑ Use 3D acceleration

☑ Use 3D texture mapping

☑ Use bus mastering (OpenGL)

General settings

☐ Use device bitmaps caching

☑ Use real-time pointer shape update

☑ Use Write-Combining on Pentium Pro/II

☑ Use filtering when scaling

☑ Use bus mastering

☐ Use secondary display controller as a Windows monitor

FTHF0622.EPS

➔ The “Performance” window opens.

(19) Click Yes.

➔ The main controller unit will restart.

(20) After restarting the main controller unit, shut down it.

(21) If a genuine monitor has not been connected, remove the jig monitor usd and then connect a genuine monitor.

(22) Start up the main controller unit.

(23) In compliance with the genuine monitor specifications, set maximum resolution and refresh frequency, etc. accordingly.

◆ NOTE ◆

When maximum resolution has been set to 1280×1024 pixels at step (23) above in compliance with the jig monitor specifications, be sure to change it to 1600×1200 pixels after a genuine monitor has been connected.
This is because the AP has been optimized to 1600×1200 pixels although a genuine monitor can be displayed at 1280×1024 pixels.

Next ▸▸

For a new installation from Windows NT.

☞ *“16. Creating and Formatting the Image Storage Area on D:”*

10. Installing the SPECTRA Video Board Driver

To install the Windows NT driver, make sure to log on using the user ID (Administrator, etc.) that is qualified to modify system setup. Driver installation is not allowed with the ID of the user who is not qualified to modify the system.

◆ *IMPORTANT* ◆

Have Windows NT 4.0 Service Pack 3 or later installed ahead of time.

☞ This chapter describes the installation procedure assuming that a CRT is used. When an LCD (SL-IC300) is used, see the following.

➔ "6. Installing the DVI01A/C Board Driver (A03 or Later)" and "7. Setting the Display Properties" of the "Super Resolution LCD Monitor SL-IC300 Service Manual"

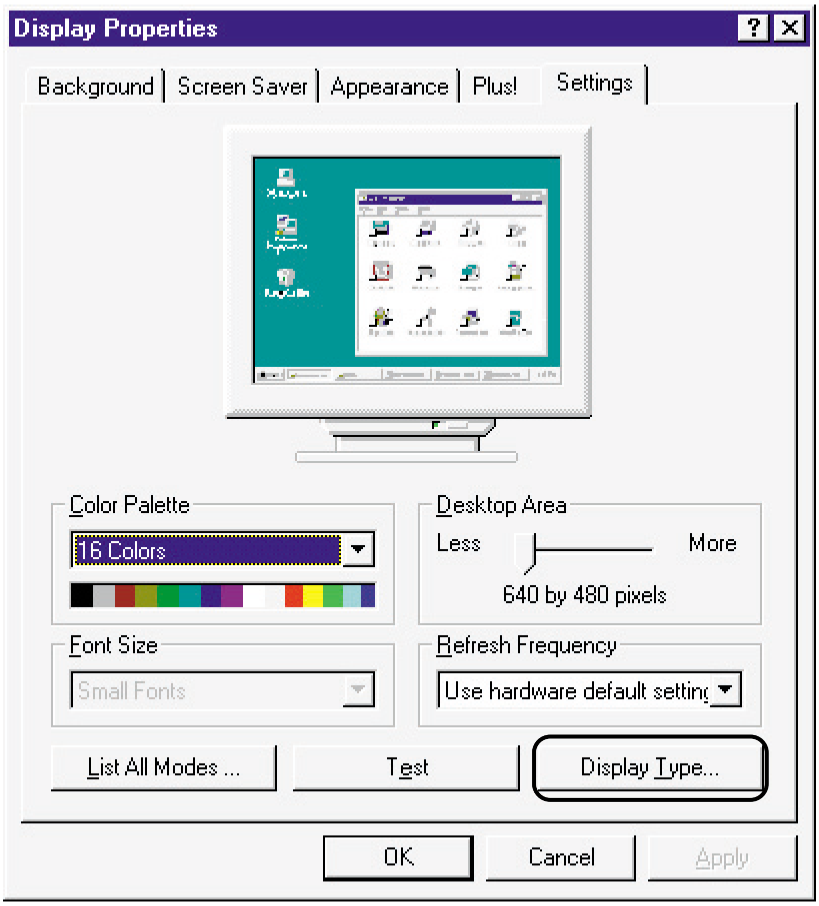
■ Windows NT 4.0 Driver Installation Procedures

(1) Start up Windows NT.

➔ Modifying hardware will start up Windows NT on the VGA monitor.

(2) Insert the “SPECTRA Series Drivers and Utilities CD” into the CD-ROM drive.

* Procedures are described hereafter taking the CD-ROM drive as “0: drive.”



Display Properties

Color Palette: 16 Colors

Desktop Area: Less — More, 640 by 480 pixels

Font Size: Small Fonts

Refresh Frequency: Use hardware default setting

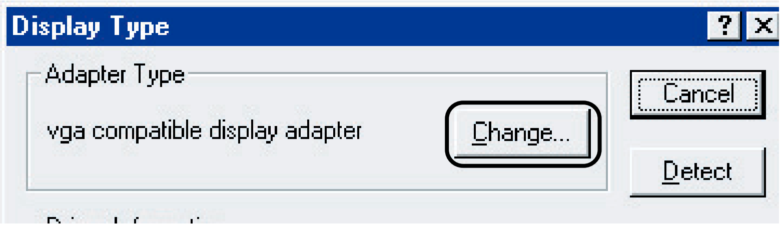
FT5H001.EPS

(3) Open the “Display Properties” screen.

➔ Right-click “Display Properties” on the desktop to select it.

➔ Click [Display Type].

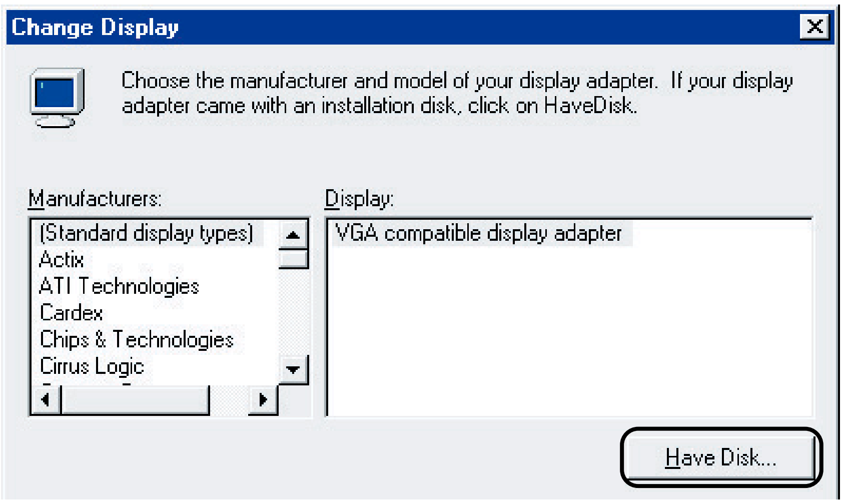
(4) Click [Change].


Display Type
?
Adapter Type
Change...
Cancel
Detect

Adapter Type: vga compatible display adapter

FT5H002.EPS

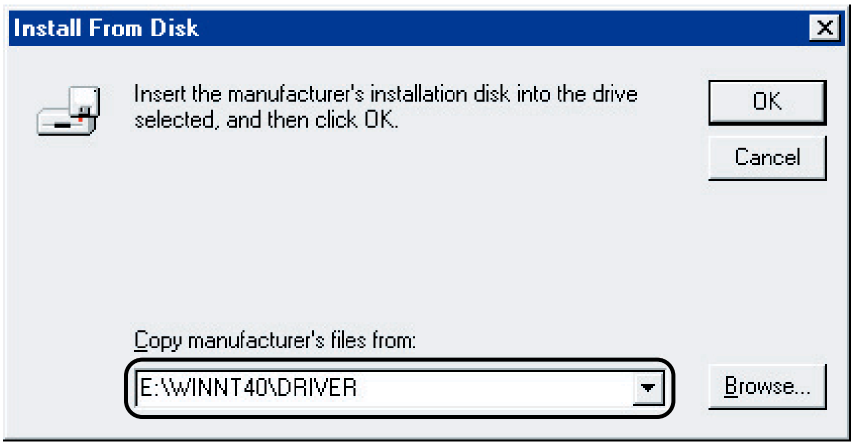
(5) Click [Have Disk].


Change Display
Manufacturers:
(Standard display types)
Actix
ATI Technologies
Cardex
Chips & Technologies
Cirrus Logic
Display:
VGA compatible display adapter
Have Disk...

Choose the manufacturer and model of your display adapter. If your display adapter came with an installation disk, click on HaveDisk.

FT5H003.EPS

(6) Enter the following in the “Copy manufacturer’s files from:.”
“E:\WINNT40\DRIVER”

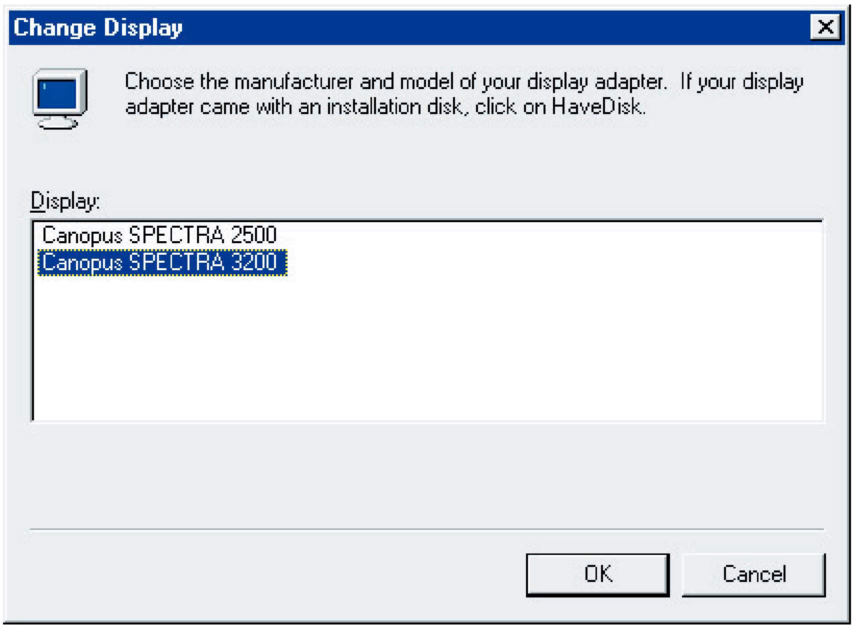

Install From Disk
OK
Cancel
Browse...

Insert the manufacturer's installation disk into the drive selected, and then click OK.

Copy manufacturer's files from: E:\WINNT40\DRIVER

FT5H004.EPS

→ Click [OK].



Change Display

Choose the manufacturer and model of your display adapter. If your display adapter came with an installation disk, click on HaveDisk.

Display:

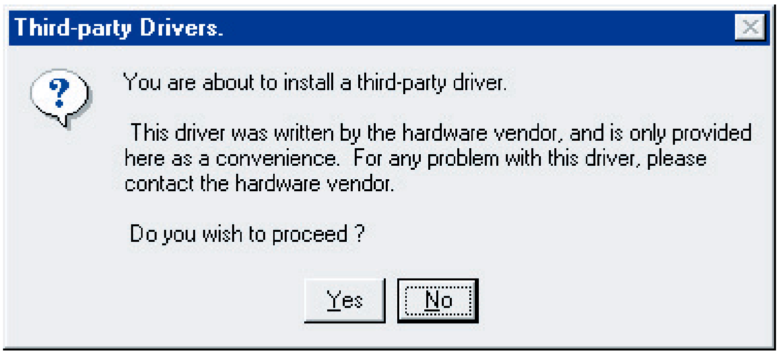
Canopus SPECTRA 2500

Canopus SPECTRA 3200

FT5H005.EPS

(7) Select “SPECTRA 3200” and click [OK].

→ The message confirming whether to install a third-party driver or not will appear, click [Yes].



Third-party Drivers.

You are about to install a third-party driver.

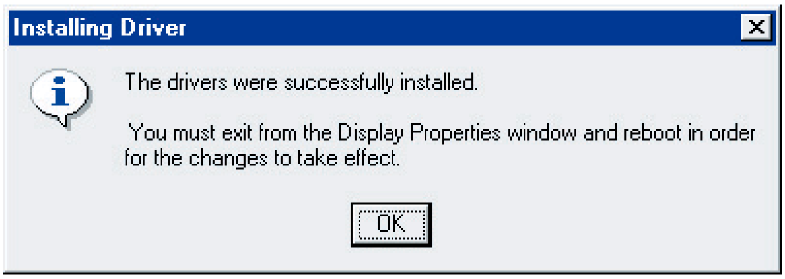
This driver was written by the hardware vendor, and is only provided here as a convenience. For any problem with this driver, please contact the hardware vendor.

Do you wish to proceed ?

FT5H006.EPS

→ Driver copy will start.

(8) When driver copy is completed, the window like that shown below will appear. Click [OK] to close all windows and reboot the computer to make settings effective.



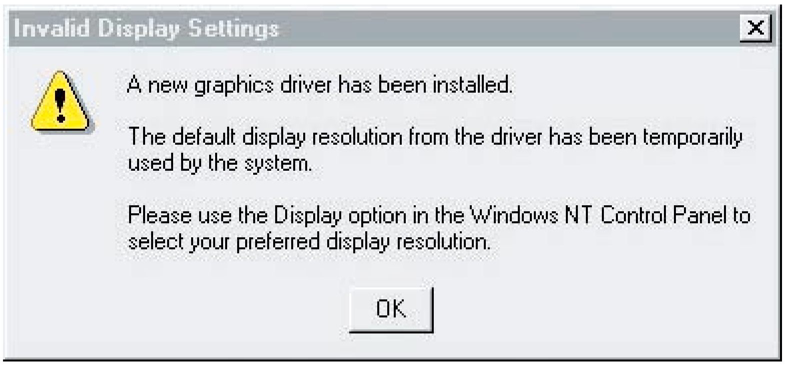
Installing Driver

The drivers were successfully installed.

You must exit from the Display Properties window and reboot in order for the changes to take effect.

FT5H007.EPS

(9) If the following message appears after the computer was rebooted, the driver has been installed correctly.



Invalid Display Settings

A new graphics driver has been installed.

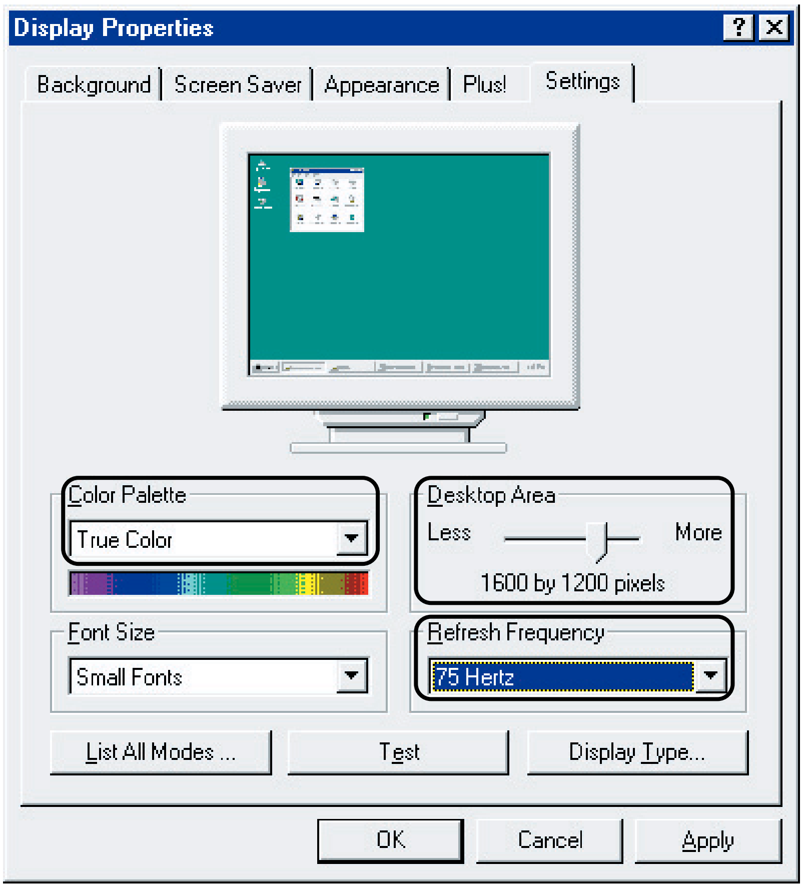
The default display resolution from the driver has been temporarily used by the system.

Please use the Display option in the Windows NT Control Panel to select your preferred display resolution.

FT5H009.EPS

➔ Install utilities next. This is not required if utilities will not be used. Re-open the “Display Properties” screen and change the resolution and the number of colors as necessary.

(10) On the “Display Properties” screen, specify “True Color, 1600 by 1200 pixels, 75Hz”.



Display Properties

Color Palette: True Color

Desktop Area: 1600 by 1200 pixels

Font Size: Small Fonts

Refresh Frequency: 75 Hertz

Background
Screen Saver
Appearance
Plus!
Settings
Less
More
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

FT5H010.EPS

11. Installing the MGA Video Board Driver

☞ This chapter describes the installation procedure assuming that a CRT is used. When an LCD (SL-IC300) is used, see the following.

➔ "6. Installing the DVI01A/C Board Driver (A03 or Later)" and "7. Setting the Display Properties" of the "Super Resolution LCD Monitor SL-IC300 Service Manual"

In this section, the following abbreviations are used for convenience.

- Windows NT .... NT
- Video board driver ..... VD

Perform this procedure after installing Windows NT (NT) or when reinstalling the video board driver (VD).

● The following will be required for the installation:

- Floppy disks: Driver disks 1 and 2
- VGA monitor

The VD for QA-WS can be installed using floppy disks only. CD-ROM is not available.

◆ *NOTE* ◆

● When installing the VD, first connect the VGA monitor to the connector for the 21" CRT monitor.
● When re-installing the VD, the VGA monitor need not be used if images are displayed normally on the 21" CRT monitor.

◆ *NOTE* ◆

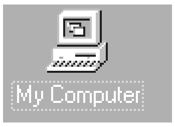
If the resolution has been set to 1280 × 1024 temporarily, perform "11.3 Changing the Resolution Settings" after connecting the 21" CRT monitor, and set the resolution to 1600 × 1200 again.

11.1 Installing Using the CD-ROM

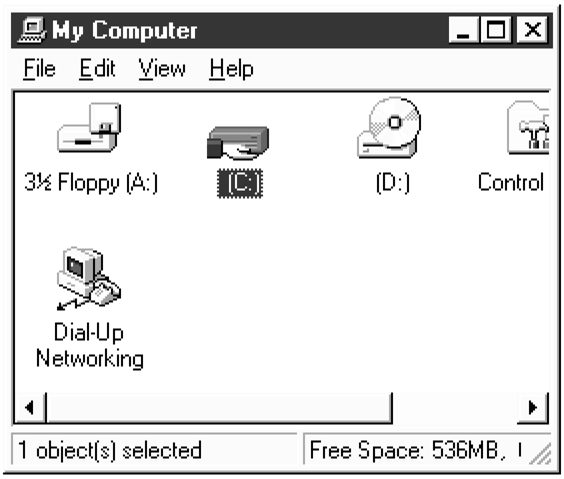
Not available for QA-WS.

11.2 Installing Using Floppy Disks

(1) Double-click the "My Computer" menu on the Windows NT desktop.


My Computer

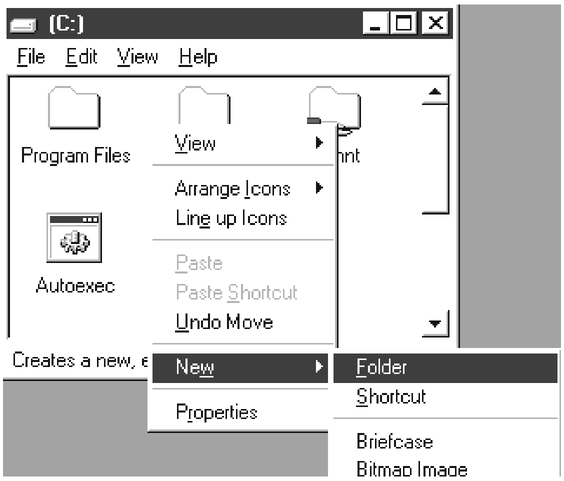
(2) Double-click "[C:]" on the "My Computer" menu.


My Computer
File Edit View Help
3½ Floppy (A:)
[C:]
(D:)
Control
Dial-Up Networking

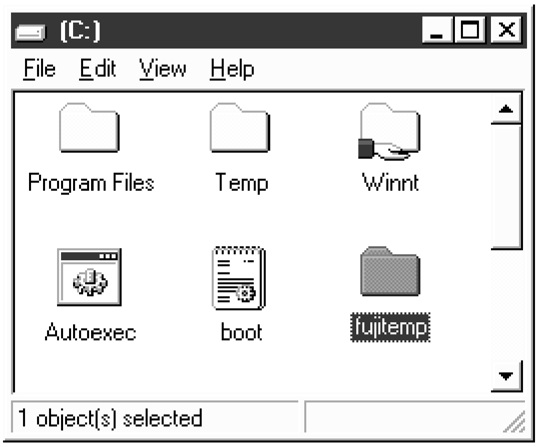
1 object(s) selected

Free Space: 536MB,

(3) Right-click the mouse on the "[C:]" window. Select "New" on the menu that appears and then "Folder" on the submenu.


[C:]
File Edit View Help
Program Files
Autoexec
nnt
View
Arrange Icons
Line up Icons
Paste
Paste Shortcut
Undo Move
New
Properties
Folder
Shortcut
Briefcase
Bitmap Image
Creates a new, e

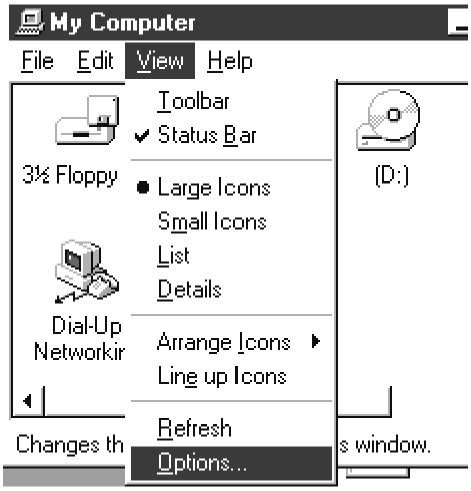
(4) Enter "fujitemp" on the newly created folder and press the <Enter> key.


[C:]
File Edit View Help
Program Files
Temp
Winnt
Autoexec
boot
fujitemp

1 object(s) selected

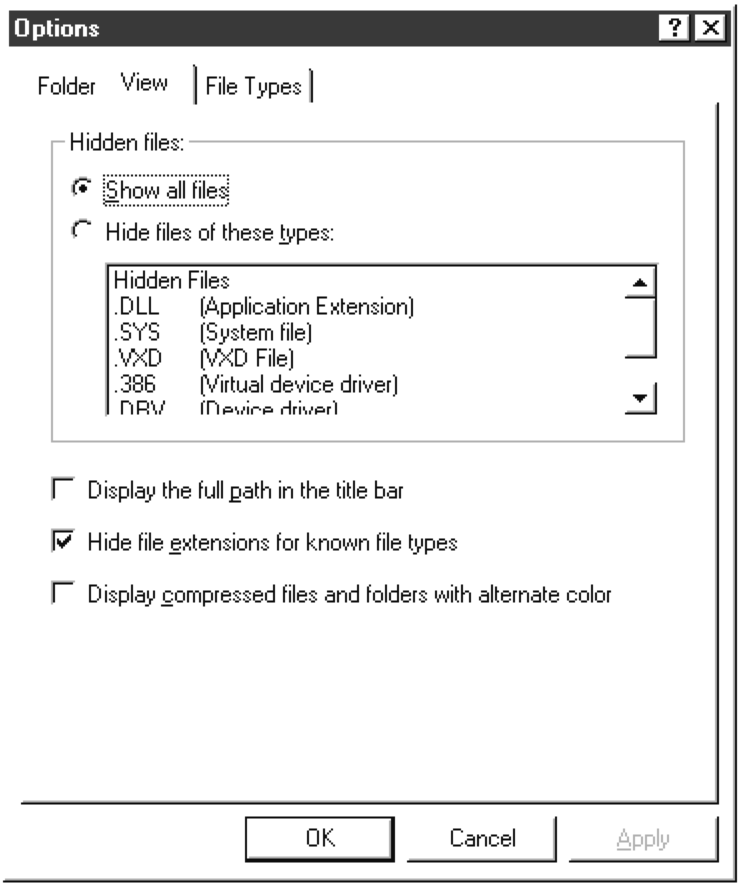
(5) Insert the "Video Driver Disk 1" FD into the FDD.

(6) Select "View" from the "My Computer" menu and then "Options" from the submenu.


My Computer
File Edit View Help
Toolbar
✓ Status Bar
● Large Icons
Small Icons
List
Details
Arrange Icons
Line up Icons
Refresh
Options...
3½ Floppy
Dial-Up Networkir
(D:)
Changes th
s window.

(7) Click the "View" tag on the "Options" menu that appears.

(8) Select "Show all files" on the check box that appears and click [OK].


Options
Folder
View
File Types
OK
Cancel
Apply

Hidden files:

● Show all files

○ Hide files of these types:

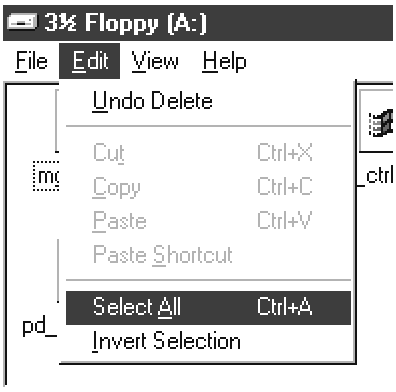
Hidden Files	
.DLL	(Application Extension)
.SYS	(System file)
.VXD	(VXD File)
.386	(Virtual device driver)
.DRV	(Device driver)

☐ Display the full path in the title bar

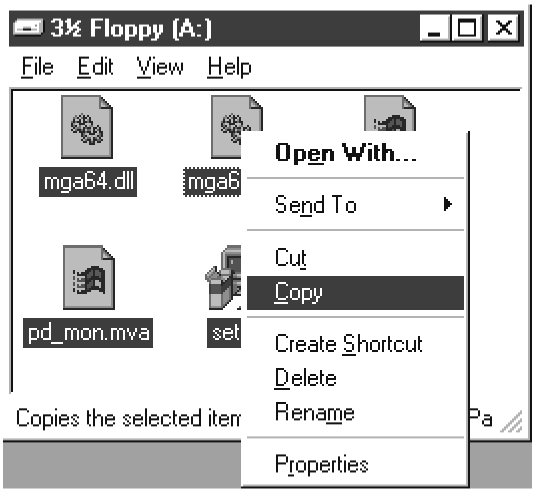
☑ Hide file extensions for known file types

☐ Display compressed files and folders with alternate color

(9) Double-click "FD Drive [A:]" on the "My Computer" menu to display the full contents of the FD thus specified.

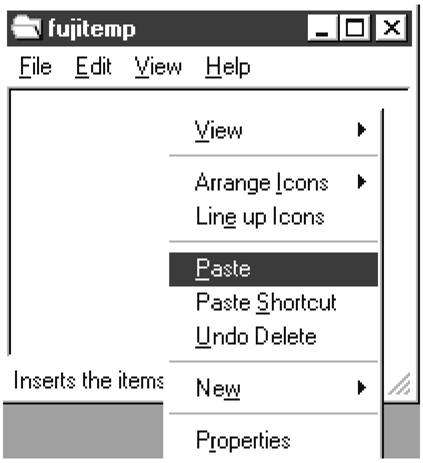

3½ Floppy (A:)
File Edit View Help
Undo Delete
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Paste Shortcut
Select All Ctrl+A
Invert Selection
mg
pd_
ctrl

(10) When all necessary items have been selected, right-click the mouse and select "Copy" on the menu that appears.


3½ Floppy (A:)
File Edit View Help
mga64.dll
mga6
pd_mon.mva
set
Open With...
Send To
Cut
Copy
Create Shortcut
Delete
Rename
Properties
Copies the selected item
Pa

(11) Double-click the "fujitemp" folder on the "[C:]" window to open it.

(12) Right-click the mouse on the "fujitemp" folder and select "Paste". The specified file will then be copied from FD1 onto the "fujitemp" folder.

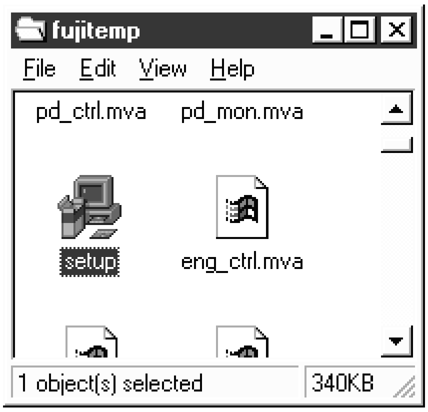

fujitemp
File Edit View Help
View
Arrange Icons
Line up Icons
Paste
Paste Shortcut
Undo Delete
New
Properties
Inserts the items

(13) When file copy has been completed, close all windows and remove the FD from the FDD.

(14) Following the same procedures as in steps (1) to (13) above, copy the contents of the "Video Driver Disk 2" FD onto the "fujitemp" folder.

(15) After the 2 FDs have fully been copied, open the "My Computer" menu and double-click "[C:]" and then "fujitemp".

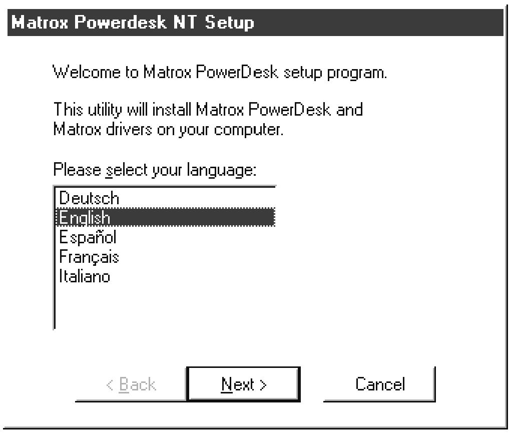
(16) Double-click the "Setup" icon on the "fujitemp" folder.


fujitemp
File
Edit
View
Help
pd_ctrl.mva
pd_mon.mva
setup
eng_ctrl.mva
1 object(s) selected
340KB

◆ *NOTE* ◆

For step (16) above, double-click the computer icon.

(17) In the following dialog box, select the desired installation language, and click [Next>].



Matrox Powerdesk NT Setup

Welcome to Matrox PowerDesk setup program.

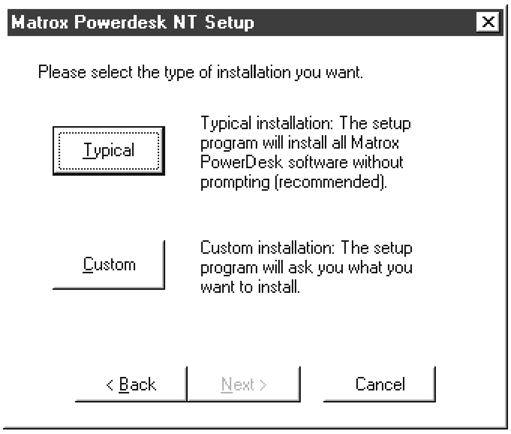
This utility will install Matrox PowerDesk and Matrox drivers on your computer.

Please select your language:

Deutsch
English
Español
Français
Italiano

< Back
Next >
Cancel

(18) Click [Typical] for the type of installation.
Setup starts copying files.



Matrox Powerdesk NT Setup

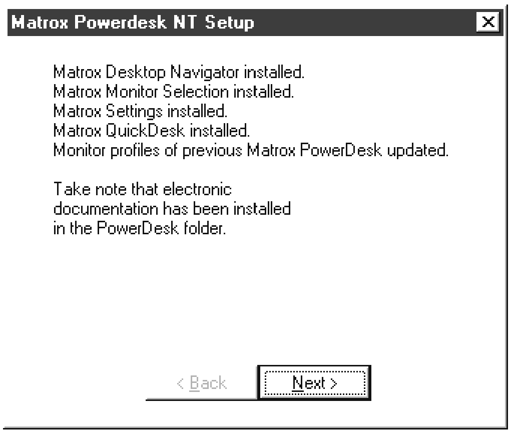
Please select the type of installation you want.

Typical installation: The setup program will install all Matrox PowerDesk software without prompting (recommended).

Custom installation: The setup program will ask you what you want to install.

Typical
Custom
< Back
Next >
Cancel

(19) At the following screen, click [Next>] to start installation.


Matrox Powerdesk NT Setup
< Back
Next >

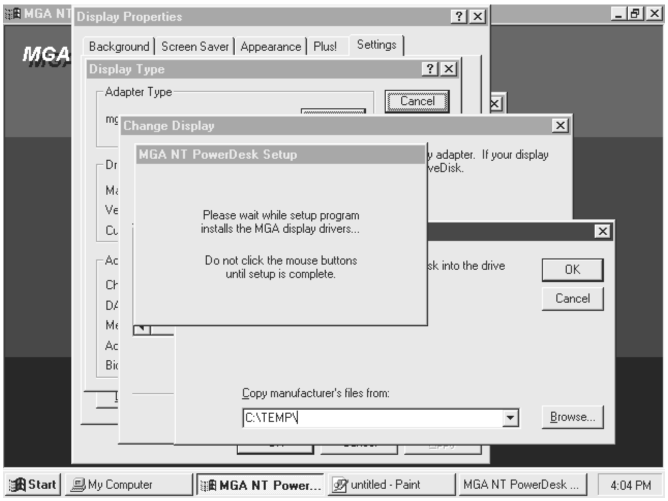
Matrox Desktop Navigator installed.
Matrox Monitor Selection installed.
Matrox Settings installed.
Matrox QuickDesk installed.
Monitor profiles of previous Matrox PowerDesk updated.

Take note that electronic
documentation has been installed
in the PowerDesk folder.

(20) Installation starts.

◆ NOTE ◆

Do not touch the keyboard and mouse during installation.


Display Properties
Background
Screen Saver
Appearance
Plus!
Settings
Display Type
Adapter Type
Cancel
Change Display
MGA NT PowerDesk Setup
OK
Cancel
Browse...
Start
My Computer
MGA NT Power...
untitled - Paint
MGA NT PowerDesk ...
4:04 PM

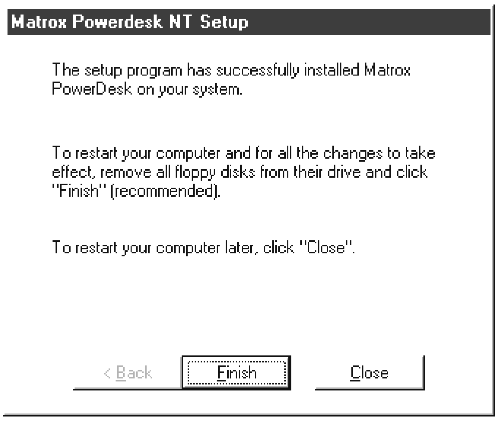
Please wait while setup program installs the MGA display drivers...

Do not click the mouse buttons until setup is complete.

Copy manufacturer's files from: C:\TEMP\

Installing

(21) When installation completes, the following screen appears.
To restart the unit, remove the floppy disk and click [Finish].


Matrox Powerdesk NT Setup
< Back
Finish
Close

The setup program has successfully installed Matrox PowerDesk on your system.

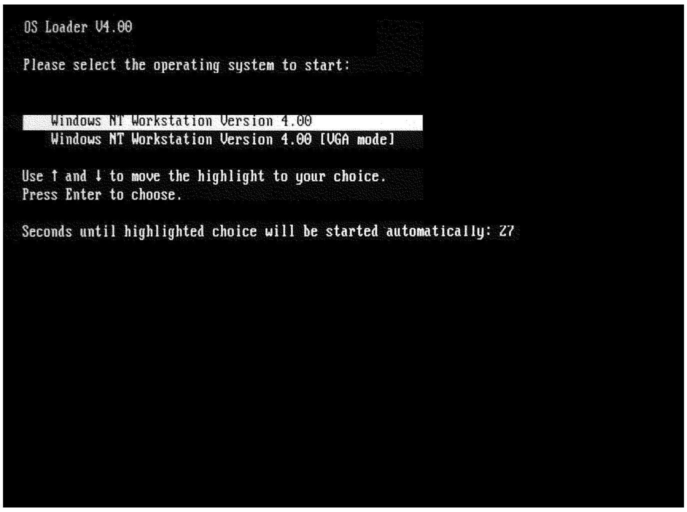
To restart your computer and for all the changes to take effect, remove all floppy disks from their drive and click "Finish" (recommended).

To restart your computer later, click "Close".

(22) When the unit is restarted and the screen to select the OS appears, select "Windows NT Workstation Version 4.00", and press the <Enter> key.

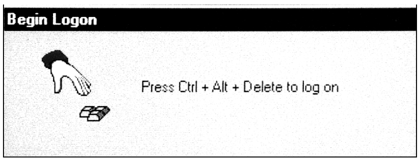
◆ REFERENCE ◆

If the <Enter> key is not pressed while waiting to start up, Windows NT will start automatically.



```
OS Loader V4.00

Please select the operating system to start:


    Windows NT Workstation Version 4.00
    Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 27
```

(23) The "Begin Logon" dialog box appears.
Press the <Ctrl> <Alt> and <Del> keys together.



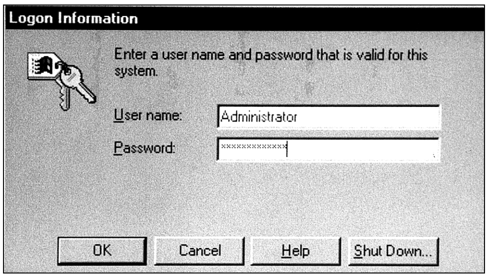
Begin Logon

Press Ctrl + Alt + Delete to log on

(24) The "Logon Information" dialog box appears.
Enter the password (fieldengineer) , and click [OK] to log onto NT.

◆ NOTE ◆

To log onto Windows-NT as the adminstrator, leave "User Name" at its default setting "Administrator".



Logon Information

Enter a user name and password that is valid for this system.

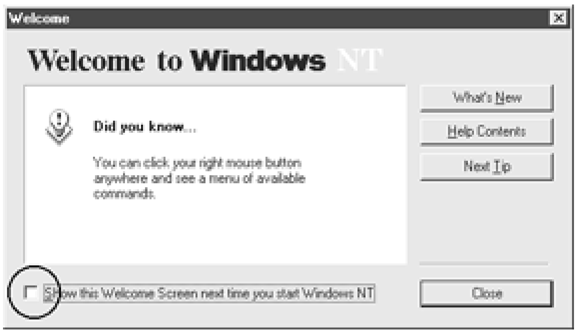
User name: Administrator

Password: *************

(25) When the "Welcome to Windows NT" appears, unselect the "Show this Welcome Screen next time you start Windows NT" radio button at the bottom, and click [Close].

◆ *NOTE* ◆

The following screen will not appear for re-installation of the VD.


Welcome

Welcome to Windows NT

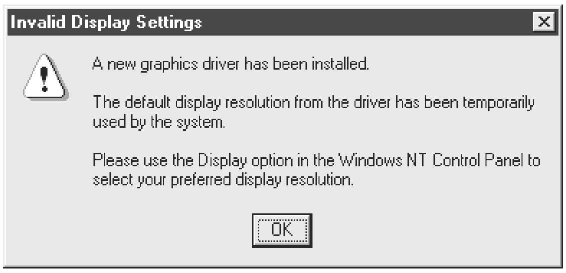
Did you know...

You can click your right mouse button anywhere and see a menu of available commands.

☐ Show this Welcome Screen next time you start Windows NT

What's New
Help Contents
Next Tip
Close

(26) The "Invalid Display Settings" dialog box appears.
Click [OK] to close it.


Invalid Display Settings

A new graphics driver has been installed.

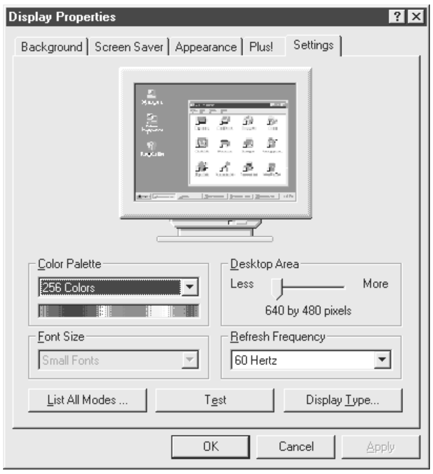
The default display resolution from the driver has been temporarily used by the system.

Please use the Display option in the Windows NT Control Panel to select your preferred display resolution.

(27) As the "Display Properties" dialog box is not used here, click [OK] to close it.

◆ *REFERENCE* ◆

The "Display Properties" dialog box is intended for setting up the NT video driver.
Since the Matrox video driver installed is used here, "Display Properties" need not be set.


Display Properties

Color Palette: 256 Colors

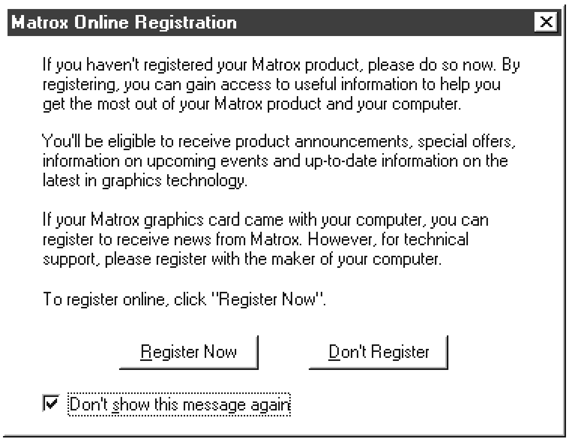
Desktop Area: 640 by 480 pixels

Font Size: Small Fonts

Refresh Frequency: 60 Hertz

Background
Screen Saver
Appearance
Plus!
Settings
Less
More
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

(28) A menu like that shown below appears. Click the "Don't show this message again" check box and then the "Don't Register" check box.


Matrox Online Registration

If you haven't registered your Matrox product, please do so now. By registering, you can gain access to useful information to help you get the most out of your Matrox product and your computer.

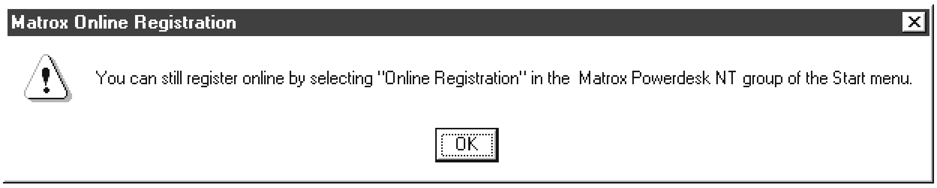
You'll be eligible to receive product announcements, special offers, information on upcoming events and up-to-date information on the latest in graphics technology.

If your Matrox graphics card came with your computer, you can register to receive news from Matrox. However, for technical support, please register with the maker of your computer.

To register online, click "Register Now".

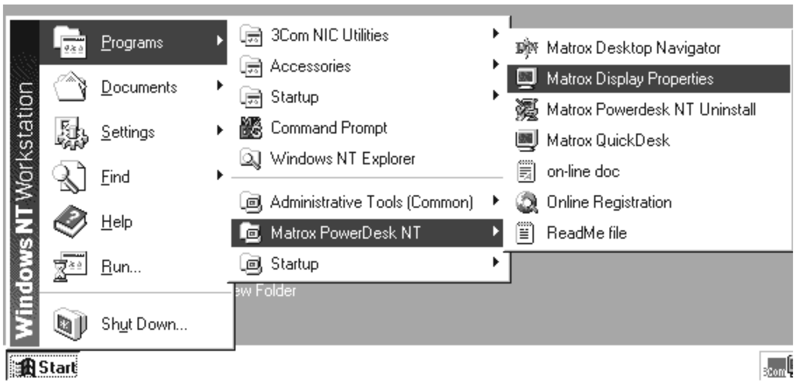
Register Now
Don't Register
☑ Don't show this message again

(29) The confirmation message appears. Click [OK].

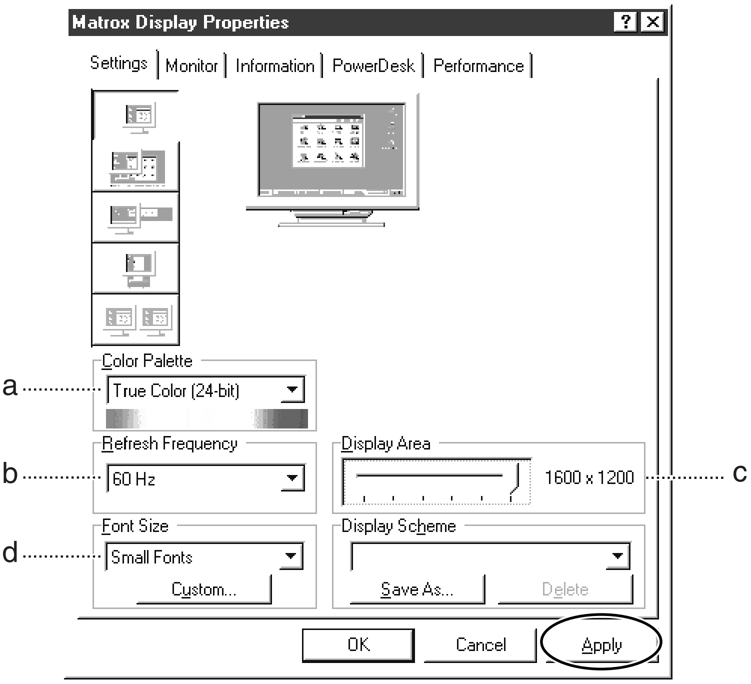

Matrox Online Registration

You can still register online by selecting "Online Registration" in the Matrox Powerdesk NT group of the Start menu.

(30) Click the [Start] menu at the bottom left of the desktop. Select "Programs" first, then "Matrox PowerDesk NT", and finally "Matrox Display Properties".


Windows NT Workstation
Programs
Documents
Settings
Find
Help
Run...
Shut Down...
Start
3Com NIC Utilities
Accessories
Startup
Command Prompt
Windows NT Explorer
Administrative Tools (Common)
Matrox PowerDesk NT
Startup
Matrox Desktop Navigator
Matrox Display Properties
Matrox Powerdesk NT Uninstall
Matrox QuickDesk
on-line doc
Online Registration
ReadMe file

(31) In the "Matrox Display Properties" dialog box, click the "Matrox Settings" tag.
In the following dialog box, set each box , and click [Apply].


Matrox Display Properties
Settings
Monitor
Information
PowerDesk
Performance
a
b
c
d
OK
Cancel
Apply
Custom...
Save As...
Delete

Color Palette: True Color (24-bit)

Refresh Frequency: 60 Hz

Display Area: 1600 x 1200

Font Size: Small Fonts

Display Scheme:

a. True Color (24bit)
b. 60Hz
c. 1600 × 1200 or 1280 × 1024
d. Small Fonts

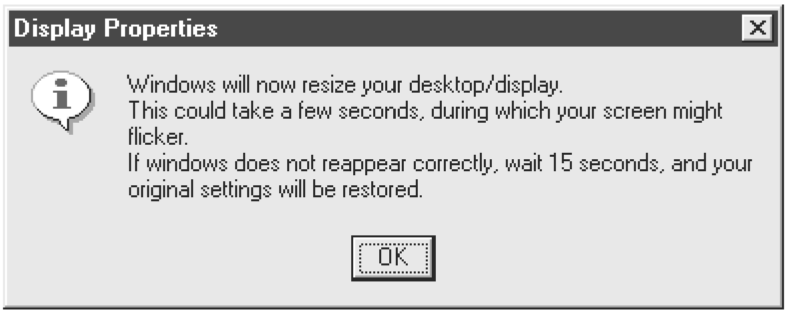
◆ **NOTE** ◆

If the resolution is set to 1280 × 1024 temporarily, perform "11.3 Changing the Resolution Settings" after connecting to the 21" CRT monitor, and set the resolution to 1600 × 1200.

(32) Read the message, and click [OK].

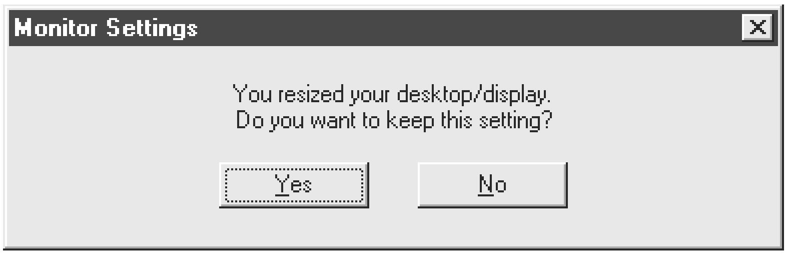
◆ **REFERENCE** ◆

The message means that the "Display Properties" dialog box will be returned to the default settings if you don't click Yes or No within 15 seconds .
If settings are set back to default, go back to the previous step and set again.


Display Properties
OK

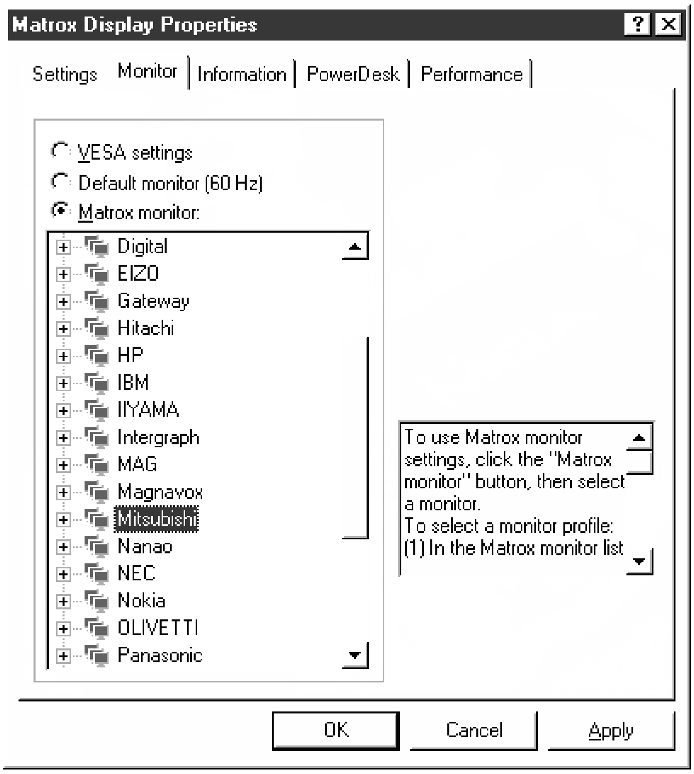
Windows will now resize your desktop/display.
This could take a few seconds, during which your screen might flicker.
If windows does not reappear correctly, wait 15 seconds, and your original settings will be restored.

(33) In the following dialog box, click [Yes].


Monitor Settings
Yes
No

You resized your desktop/display.
Do you want to keep this setting?

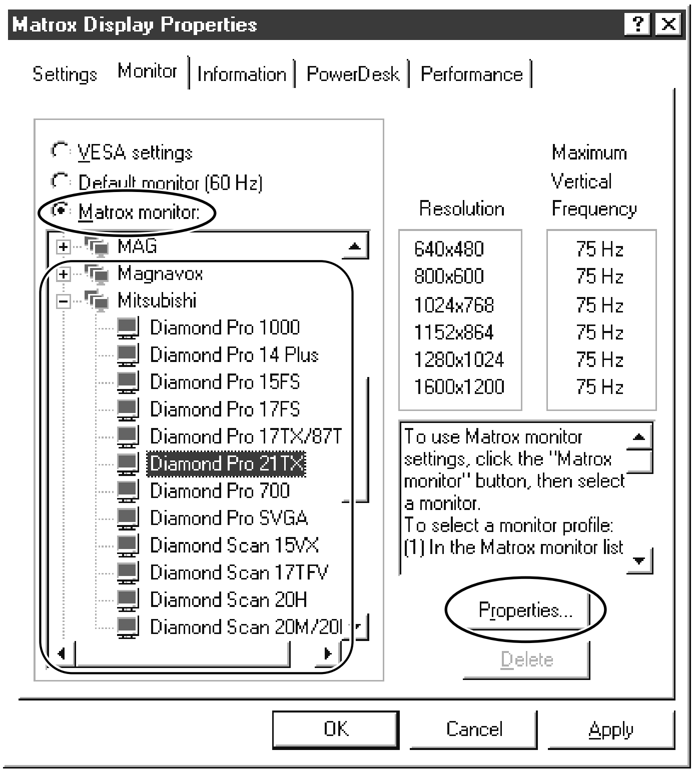
(34) In the "Matrox Display Properties" dialog box, click the "Monitor" tag.
Then click "Matrox monitor" and select "+" at "Mistubishi" in the list box.


Matrox Display Properties
Settings
Monitor
Information
PowerDesk
Performance
Digital
EIZO
Gateway
Hitachi
HP
IBM
IIYAMA
Intergraph
MAG
Magnavox
Mitsubishi
Nanao
NEC
Nokia
OLIVETTI
Panasonic
OK
Cancel
Apply

○ VESA settings
○ Default monitor (60 Hz)
● Matrox monitor:

To use Matrox monitor settings, click the "Matrox monitor" button, then select a monitor.
To select a monitor profile:
(1) In the Matrox monitor list

(35) Select "Diamond Pro21TX" in the list box, and click [Properties].


Matrox Display Properties
? ×
Settings
Monitor
Information
PowerDesk
Performance
Properties...
Delete
OK
Cancel
Apply

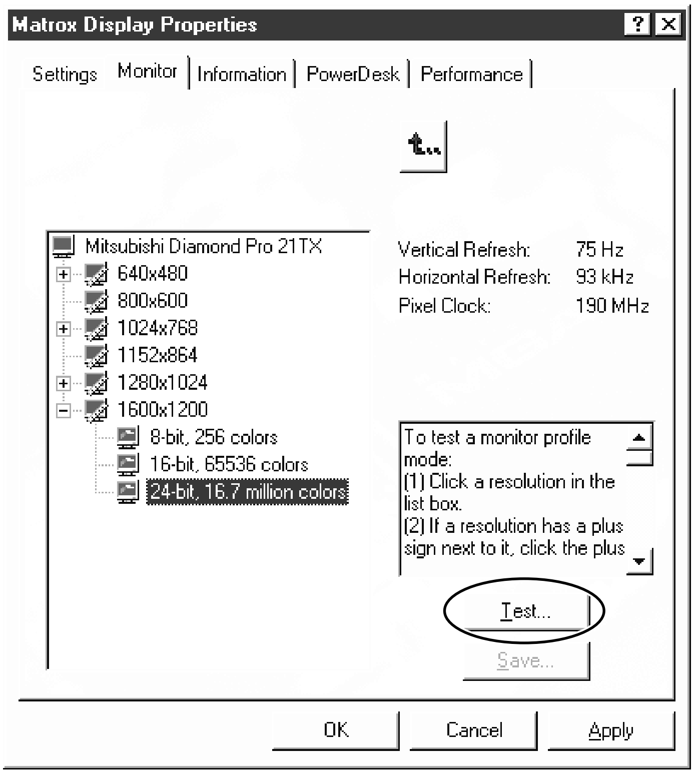
○ VESA settings
○ Default monitor (60 Hz)
● Matrox monitor:

- MAG
- Magnavox
- Mitsubishi
  - Diamond Pro 1000
  - Diamond Pro 14 Plus
  - Diamond Pro 15FS
  - Diamond Pro 17FS
  - Diamond Pro 17TX/87T
  - Diamond Pro 21TX
  - Diamond Pro 700
  - Diamond Pro SVGA
  - Diamond Scan 15VX
  - Diamond Scan 17TFV
  - Diamond Scan 20H
  - Diamond Scan 20M/20I

Resolution	Maximum Vertical Frequency
640x480	75 Hz
800x600	75 Hz
1024x768	75 Hz
1152x864	75 Hz
1280x1024	75 Hz
1600x1200	75 Hz

To use Matrox monitor settings, click the "Matrox monitor" button, then select a monitor.
To select a monitor profile:
(1) In the Matrox monitor list

(36) Set the resolution to "24-bit, 16.7 millioncolors" or Zoom by 1 default", and click [Test].


Matrox Display Properties
? ×
Settings
Monitor
Information
PowerDesk
Performance
Test...
Save...
OK
Cancel
Apply

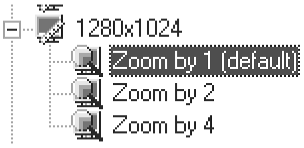
- Mitsubishi Diamond Pro 21TX
  - 640x480
  - 800x600
  - 1024x768
  - 1152x864
  - 1280x1024
  - 1600x1200
    - 8-bit, 256 colors
    - 16-bit, 65536 colors
    - 24-bit, 16.7 million colors

Vertical Refresh: 75 Hz
Horizontal Refresh: 93 kHz
Pixel Clock: 190 MHz

To test a monitor profile mode:
(1) Click a resolution in the list box.
(2) If a resolution has a plus sign next to it, click the plus

◆ NOTE ◆

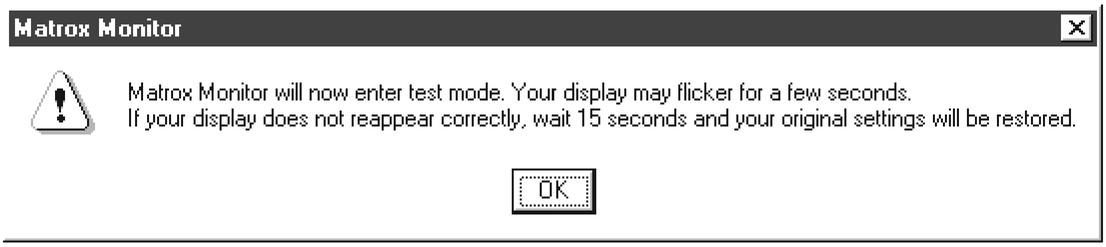
If the resolution is set to 1280 x 1024, click the "+" of "1280 x 1024" in the list box, and select "Zoom by 1 (default)".



(37) When the following message appears, click [OK] within 15 seconds.

◆ REFERENCE ◆

The message means that the "Display Properties" dialog box will be returned to the default settings if you don't click Yes or No within 15 seconds .
If settings are set back to default, go back to the previous step and set again.



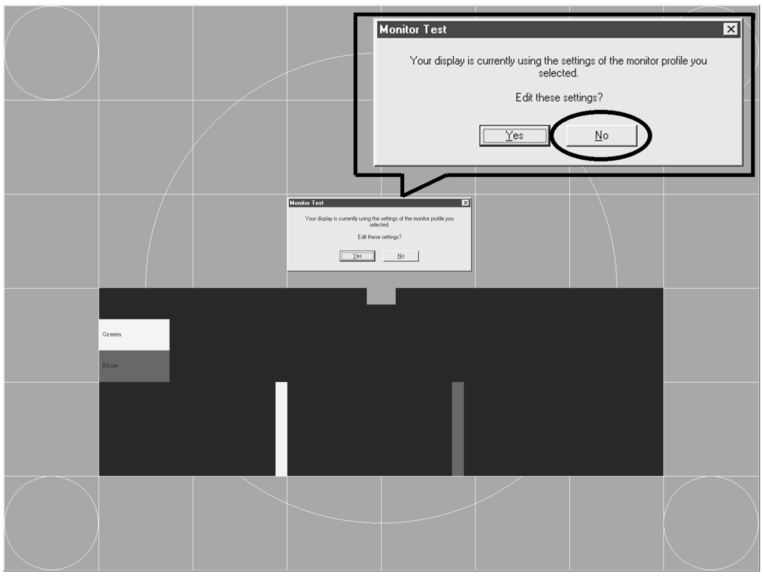
Matrox Monitor

Matrox Monitor will now enter test mode. Your display may flicker for a few seconds.
If your display does not reappear correctly, wait 15 seconds and your original settings will be restored.

(38) Read the "Monitor Test" message that appears, and click [No].

◆ REFERENCE ◆

Clicking [Yes] sets the screen adjustment mode.

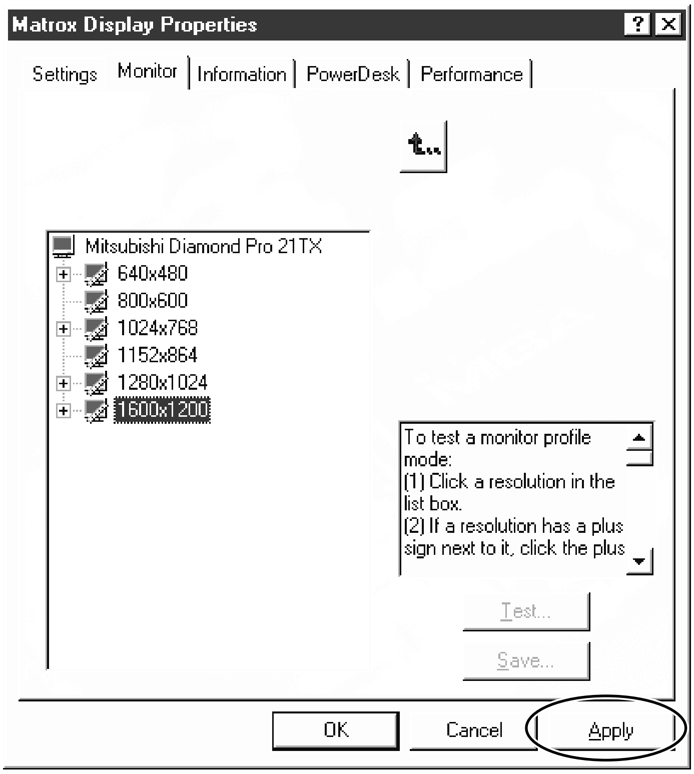


Monitor Test

Your display is currently using the settings of the monitor profile you selected.

Edit these settings?

(39) In the "MGA Display Properties" dialog box, click [Apply].

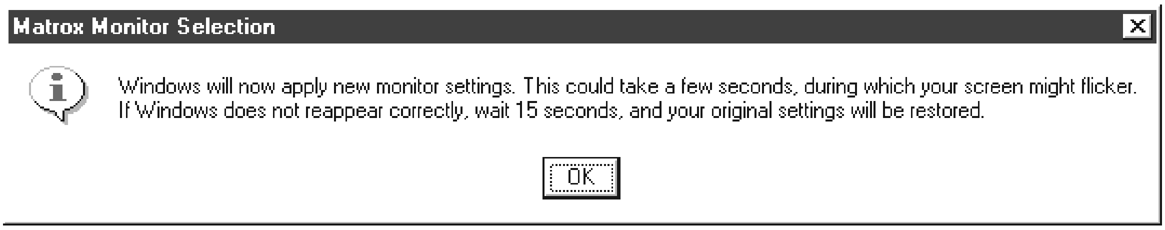

Matrox Display Properties
Settings
Monitor
Information
PowerDesk
Performance
Mitsubishi Diamond Pro 21TX
640x480
800x600
1024x768
1152x864
1280x1024
1600x1200
Test...
Save...
OK
Cancel
Apply

To test a monitor profile mode:
(1) Click a resolution in the list box.
(2) If a resolution has a plus sign next to it, click the plus

(40) When the following message appears, click [OK].

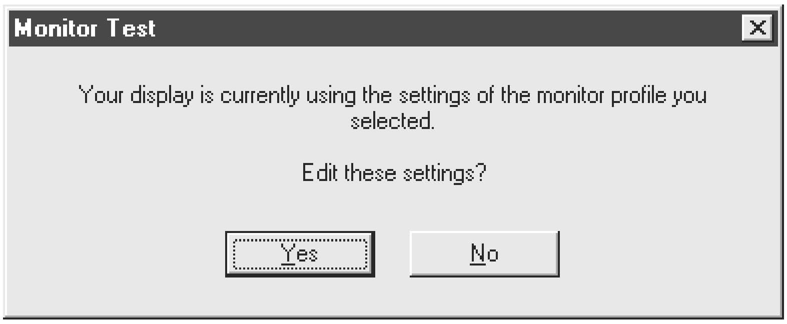
◆ *REFERENCE* ◆

The message means that the "Display Properties" dialog box will be returned to the default settings if you don't click Yes or No within 15 seconds .
If settings are set back to default, go back to the previous step set again.


Matrox Monitor Selection
OK

Windows will now apply new monitor settings. This could take a few seconds, during which your screen might flicker. If Windows does not reappear correctly, wait 15 seconds, and your original settings will be restored.

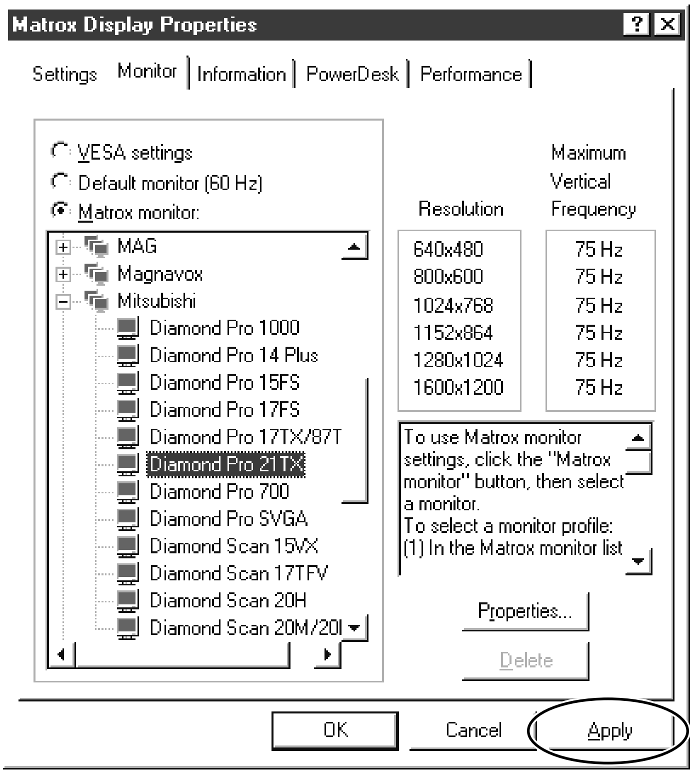
(41) Click [Yes] to save the settings.


Monitor Test
Yes
No

Your display is currently using the settings of the monitor profile you selected.

Edit these settings?

(42) In the "Matrox Display Properties" dialog box, click [OK].

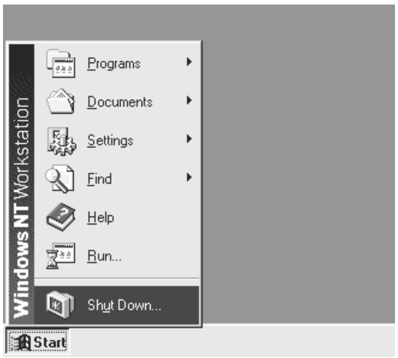

Matrox Display Properties
Settings
Monitor
Information
PowerDesk
Performance
VESA settings
Default monitor (60 Hz)
MAG
Magnavox
Mitsubishi
Diamond Pro 1000
Diamond Pro 14 Plus
Diamond Pro 15FS
Diamond Pro 17FS
Diamond Pro 17TX/87T
Diamond Pro 700
Diamond Pro SVGA
Diamond Scan 15VX
Diamond Scan 17TFV
Diamond Scan 20H
Diamond Scan 20M/20I
Properties...
Delete
OK
Cancel
Apply

● Matrox monitor: Diamond Pro 21TX

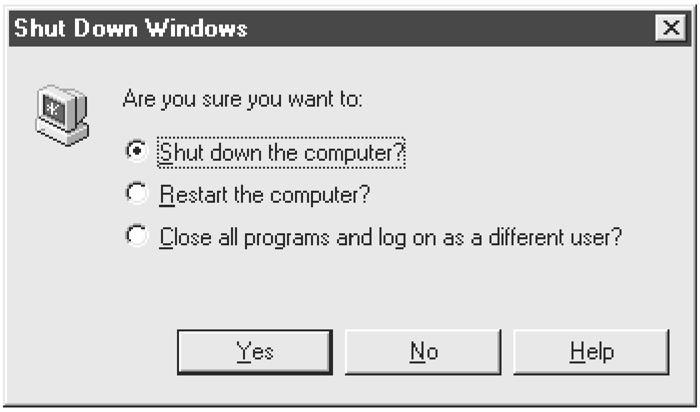
Resolution	Maximum Vertical Frequency
640x480	75 Hz
800x600	75 Hz
1024x768	75 Hz
1152x864	75 Hz
1280x1024	75 Hz
1600x1200	75 Hz

To use Matrox monitor settings, click the "Matrox monitor" button, then select a monitor.
To select a monitor profile:
(1) In the Matrox monitor list

(43) Click [Start] and then "Shut Down".


Windows NT Workstation
Programs
Documents
Settings
Find
Help
Run...
Shut Down...
Start

(44) At the following screen, click the "Shut down the computer?" and then [Yes].

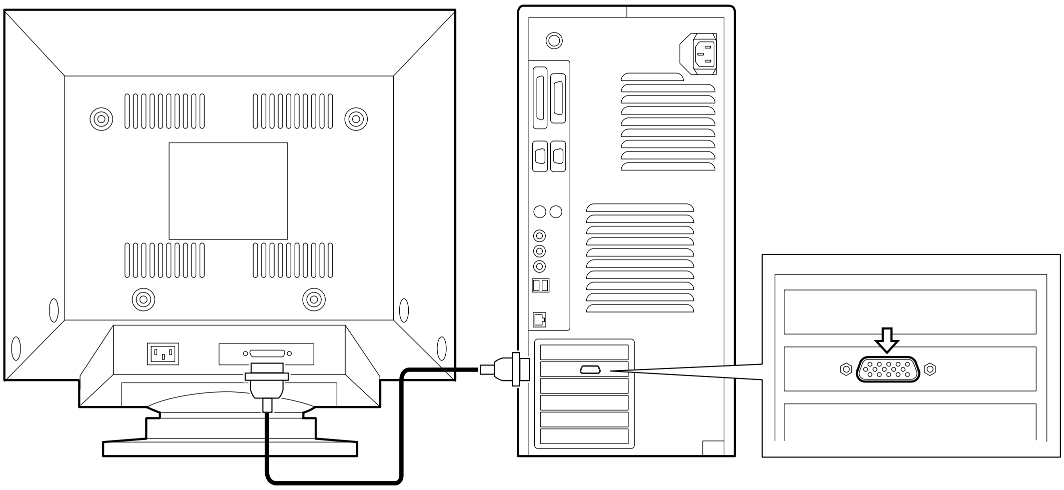

Shut Down Windows
Yes
No
Help

Are you sure you want to:

● Shut down the computer?
○ Restart the computer?
○ Close all programs and log on as a different user?

(45) When the "Shut down the computer" screen appears, turn OFF the power.

(46) If using the VGA monitor, disconnect it, and connect the 21" CRT monitor to the video board connector.



◆ *REFERENCE* ◆

After installing and setting up the VD, images can now be displayed on the 21" CRT monitor. The VGA monitor will no longer be required in installation and application setup procedures hereafter.

Next ▸▸

- *When the resolution has been set to 1280×1024* ➔ *“11.3 Changing the Resolution Settings”*
- *When only the video board driver has been installed with no resolution set to 1280×1024* ➔ *<Quitting>*
- *For a new installation from Windows NT with no resolution set to 1280×1024* ➔ *“12. Installing the ODBC Driver”*

11.3 Changing the Resolution Settings

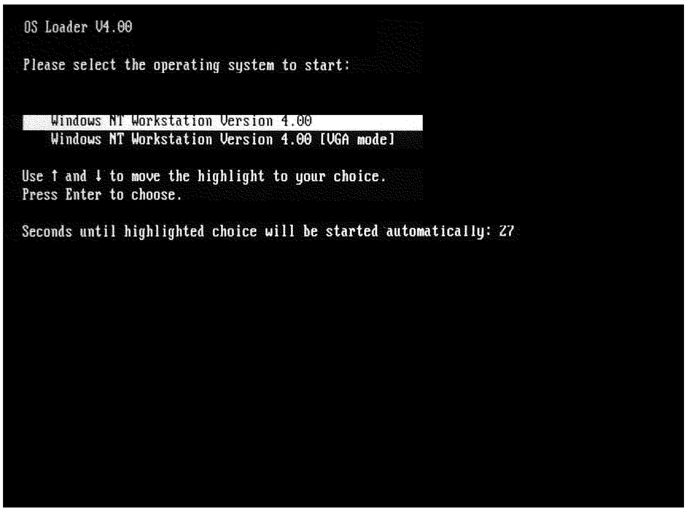
If the resolution has been set to 1280 x 1024 temporarily, set it to 1600 x 1200 using the following procedure after connecting the 21" CRT monitor.

(1) Turn ON the power of the 21"CRT monitor and this unit.

(2) Start the unit.
When the following screen appears, select "Windows NT Workstation Version 4.00" and press the <Enter> key.

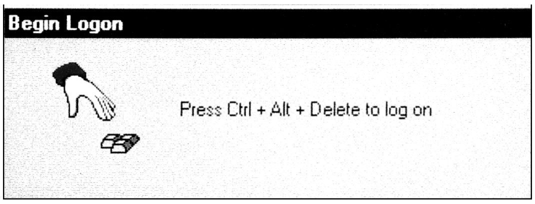
◆ *REFERENCE* ◆

If the <Enter> key is not pressed while waiting to start, NT will automatically start.



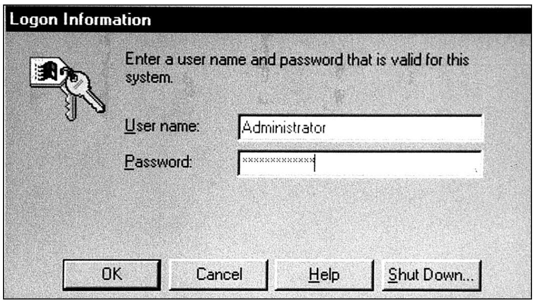
```
OS Loader V4.00

Please select the operating system to start:


   Windows NT Workstation Version 4.00
   Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 27
```

(3) When the "Begin Logon" dialog box appears, press the <Ctrl> <Alt> and <Delete> keys together.



Press Ctrl + Alt + Delete to log on

(4) The "Logon Information" dialog box appears.
Enter the password (fieldengineer) , and click [OK] to log onto NT.

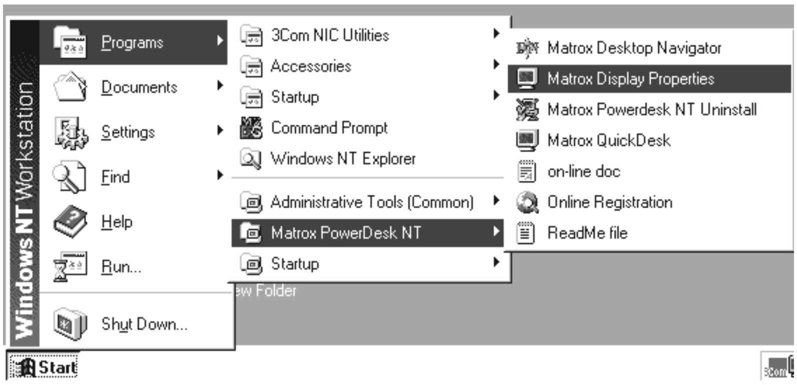


Enter a user name and password that is valid for this system.

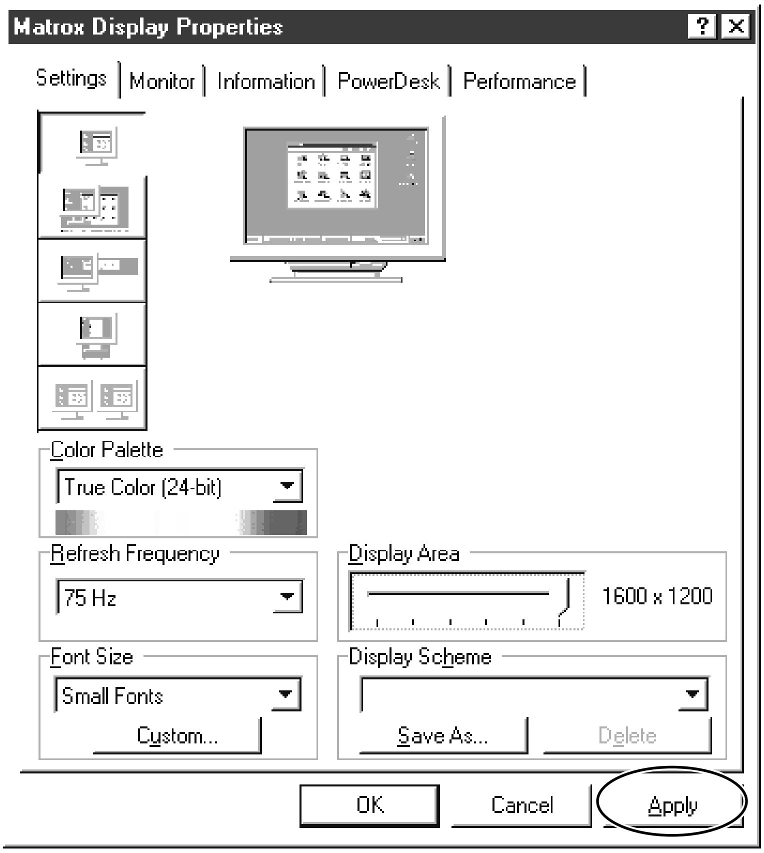
User name: Administrator

Password: *************

(5) Click the [Start] menu at the bottom left of the desktop. Select "Programs" first, then "Matrox PowerDesk NT", and finally "Matrox Display Properties".


Windows NT Workstation
Programs
Documents
Settings
Find
Help
Run...
Shut Down...
Start
3Com NIC Utilities
Accessories
Startup
Command Prompt
Windows NT Explorer
Administrative Tools (Common)
Matrox PowerDesk NT
Startup
Matrox Desktop Navigator
Matrox Display Properties
Matrox Powerdesk NT Uninstall
Matrox QuickDesk
on-line doc
Online Registration
ReadMe file

(6) In the "Matrox Display Properties" dialog box, click the "Settings" tag.
(Double-click "Matrox Settings" if using a CD-ROM.)
Change "Display Area" from "1280 x 1240" to "1600 x 1200" and click [Apply].

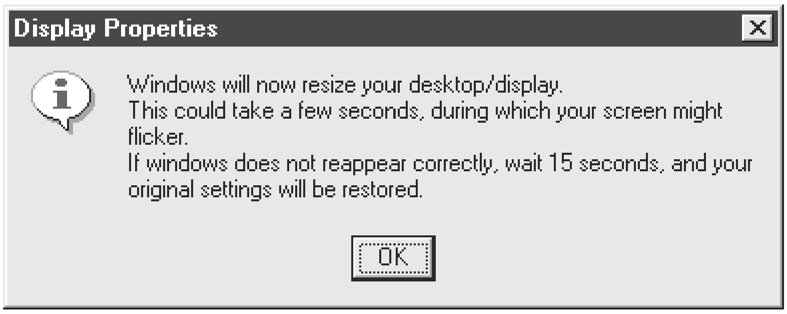

Matrox Display Properties
Settings
Monitor
Information
PowerDesk
Performance
Save As...
Delete
Custom...
OK
Cancel
Apply

Color Palette: True Color (24-bit)
Refresh Frequency: 75 Hz
Display Area: 1600 x 1200
Font Size: Small Fonts
Display Scheme:

(7) Read the message, and click [OK].

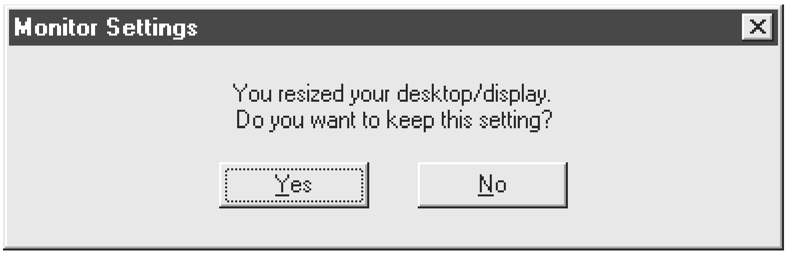
◆ REFERENCE ◆

The message means that the "Display Properties" dialog box will be returned to the default settings if you don't click Yes or No within 15 seconds .
If settings are set back to default, go back to the previous step set again.



Windows will now resize your desktop/display.
This could take a few seconds, during which your screen might flicker.
If windows does not reappear correctly, wait 15 seconds, and your original settings will be restored.

(8) In the following dialog box, click [Yes].



You resized your desktop/display.
Do you want to keep this setting?

(9) Next click [OK] and then "Matrox Display Properties".

Next ▸▸

For a new installation from Windows NT ➔ *"12. Installing the ODBC Driver"*

12. Installing the ODBC Driver

In this section, the following abbreviations are used for convenience.

- Windows NT .... NT
- Application software .... AP

Procedures described herein are just for when installing the ODBC driver (installation for overwriting or re-installation after deleting the driver) and for installing the same driver after NT has been installed.
Because the ODBC driver is deleted once Windows NT has been installed, be sure to re-install it using these procedures.

● The following will be required for the installation:

- QA-WS installation CD-ROM

◆ NOTE ◆

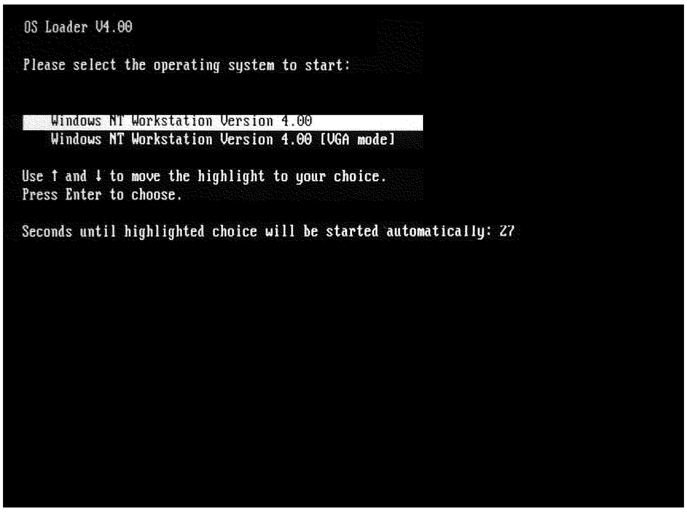
If the video board driver is installed, the 21" CRT monitor will not display properly due to horizontal Synchronization problems until the "Begin Logon" screen is displayed.
This occurs because Windows NT cannot read the video board driver.

(1) Turn ON the power of the 21"CRT monitor and unit.

(2) When the unit starts, the following screen to select the OS appears.
Select "Windows NT Workstation Version 4.00" , and press the <Enter> key.

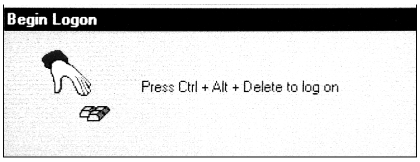
◆ REFERENCE ◆

If the <Enter> key is not pressed while waiting to start, NT will automatically start.



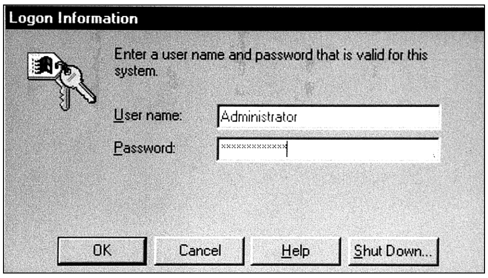
```
OS Loader V4.00

Please select the operating system to start:


    Windows NT Workstation Version 4.00
    Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 27
```

(3) When the "Begin Logon" dialog box appears, press the <Ctrl> <Alt> and <Delete> keys together.


Begin Logon

Press Ctrl + Alt + Delete to log on

(4) The "Logon Information" dialog box appears.
Enter the password (fieldengineer) , and click [OK] to log onto Windows NT.


Logon Information

Enter a user name and password that is valid for this system.

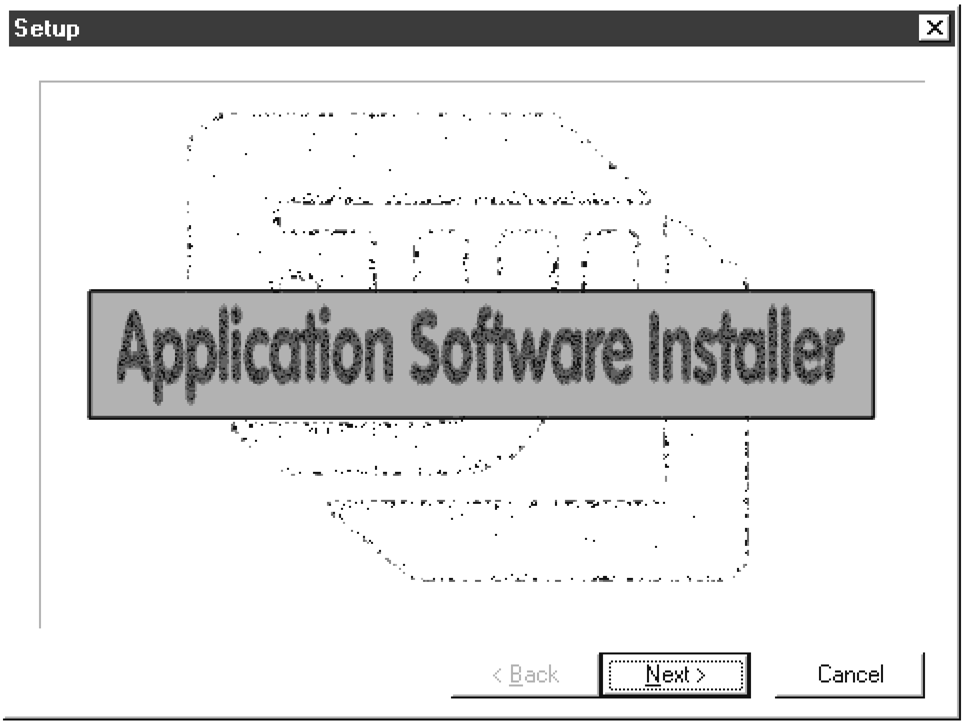
User name: Administrator

Password: xxxxxxxxxxxxx

OK
Cancel
Help
Shut Down...

(5) Insert the QA-WS installation CD-ROM into the CD-ROM drive.

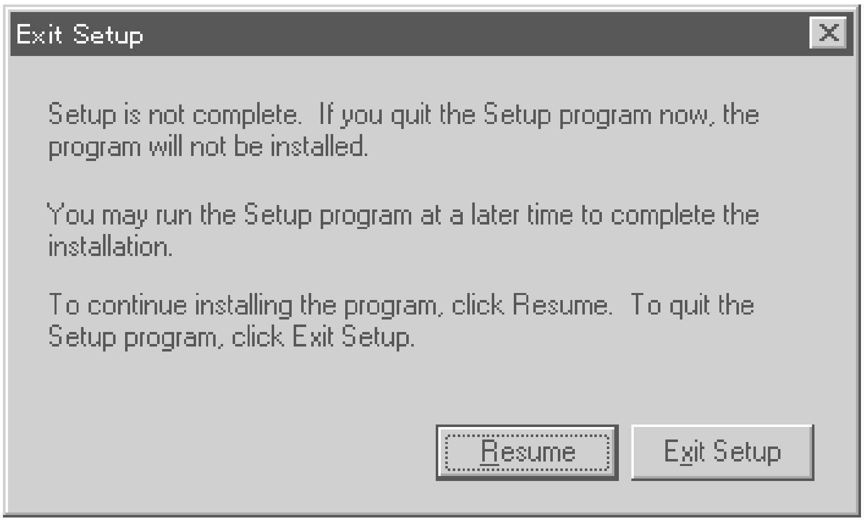
(6) The CD-ROM starts and the following screen appears.
Click [Cancel] to close the screen.


Setup
Application Software Installer
< Back
Next >
Cancel

(7) Click [Exit Setup].

◆ REFERENCE ◆

The following screen appears if AP installation is canceled before it has completed.
Click [Resume] to continue and [Exit Setup] to cancel installation.



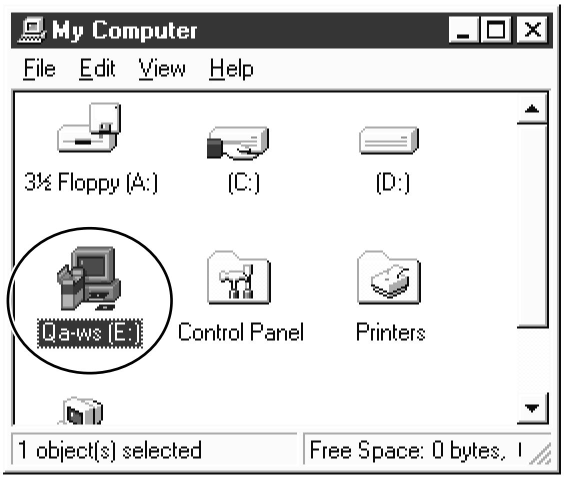
Exit Setup
Resume
Exit Setup

Setup is not complete. If you quit the Setup program now, the program will not be installed.

You may run the Setup program at a later time to complete the installation.

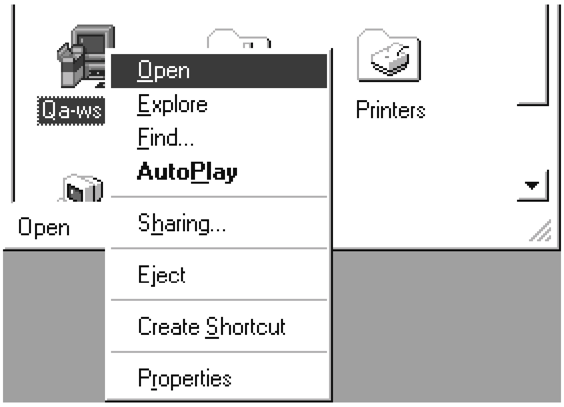
To continue installing the program, click Resume. To quit the Setup program, click Exit Setup.

(8) Double-click "My Computer" on the Windows NT desktop.
Right-click "QA-WS" in "My Computer".
Drive names [D:] and [E:] on the display below can differ depending on the case. (If the ODBC driver has been deleted after NT installation, "QA-WS" will be the [D:] drive.)



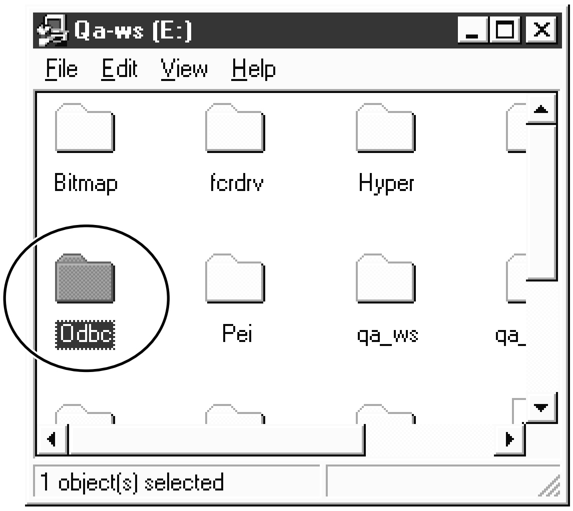
My Computer
File Edit View Help
3½ Floppy (A:)
(C:)
(D:)
Qa-ws (E:)
Control Panel
Printers
1 object(s) selected
Free Space: 0 bytes,

(9) Click "Open" in the following menu.

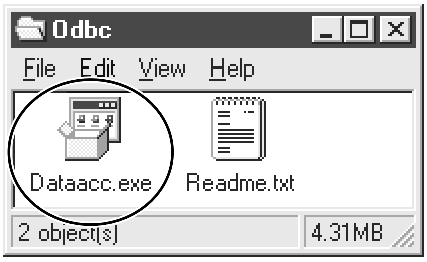


Qa-ws
Printers
Open
Open
Explore
Find...
AutoPlay
Sharing...
Eject
Create Shortcut
Properties

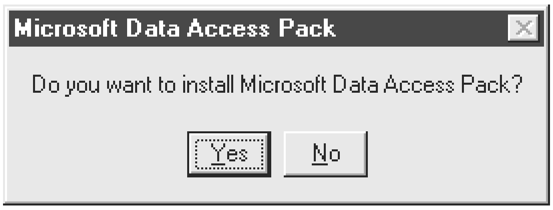
(10) Double-click "Odbc".


Qa-ws (E:)
File Edit View Help
Bitmap
fcrdrv
Hyper
Odbc
Pei
qa_ws
qa_
1 object(s) selected

(11) Double-click "Dataacc.exe".

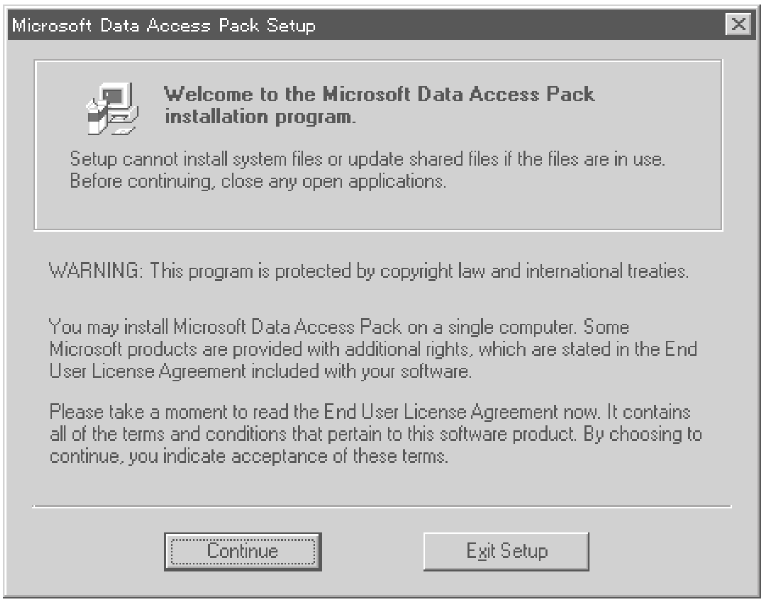

Odbc
File Edit View Help
Dataacc.exe
Readme.txt
2 object(s)
4.31MB

(12) Click [Yes] to install the ODBC driver.


Microsoft Data Access Pack
Yes
No

Do you want to install Microsoft Data Access Pack?

(13) Press the [Continue] button to continue with the installation.


Microsoft Data Access Pack Setup
Continue
Exit Setup

Welcome to the Microsoft Data Access Pack installation program.

Setup cannot install system files or update shared files if the files are in use. Before continuing, close any open applications.

WARNING: This program is protected by copyright law and international treaties.

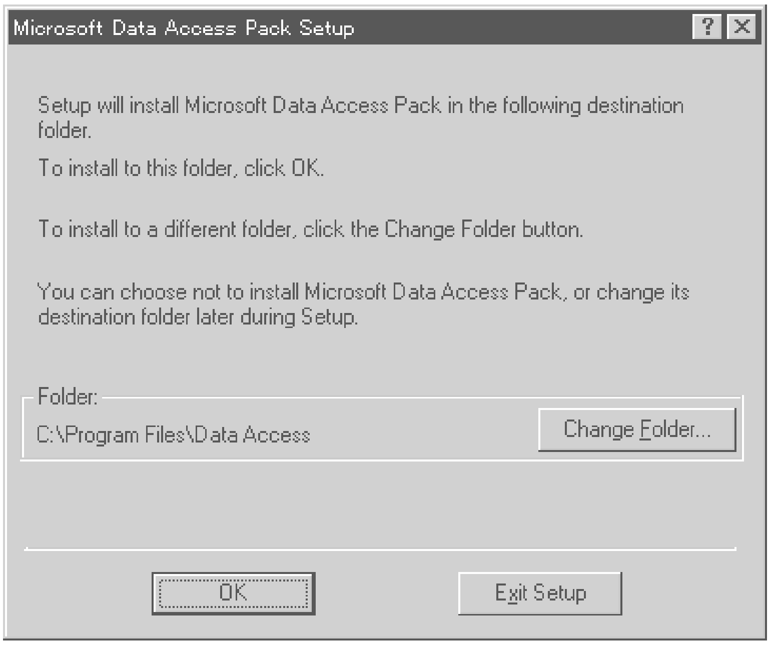
You may install Microsoft Data Access Pack on a single computer. Some Microsoft products are provided with additional rights, which are stated in the End User License Agreement included with your software.

Please take a moment to read the End User License Agreement now. It contains all of the terms and conditions that pertain to this software product. By choosing to continue, you indicate acceptance of these terms.

(14) Setup will confirm the folder to install the ODBC driver. Click [OK].

◆ NOTE ◆

This setting must be C:\Program Files\Data Access (default directory). Do not change it.



Setup will install Microsoft Data Access Pack in the following destination folder.

To install to this folder, click OK.

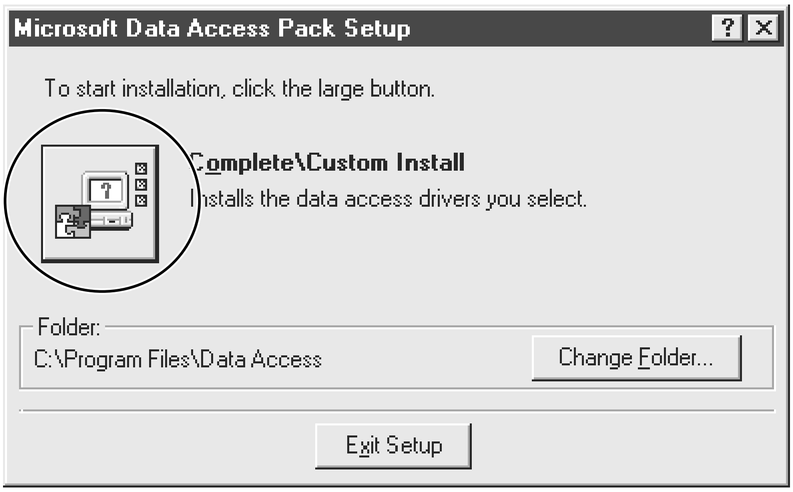
To install to a different folder, click the Change Folder button.

You can choose not to install Microsoft Data Access Pack, or change its destination folder later during Setup.

Folder:
C:\Program Files\Data Access

Microsoft Data Access Pack Setup
?
Change Folder...
OK
Exit Setup

(15) Click the large button to start installation.



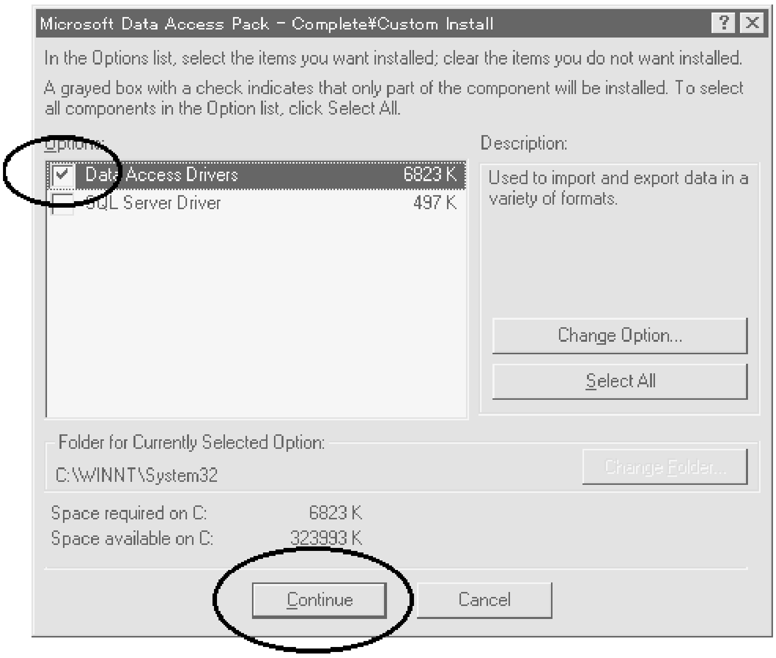
To start installation, click the large button.

Complete\Custom Install
Installs the data access drivers you select.

Folder:
C:\Program Files\Data Access

Microsoft Data Access Pack Setup
?
Change Folder...
Exit Setup

(16) The following screen appears during installation.
Select "Data Access Drivers" and click [Continue].



Microsoft Data Access Pack - Complete¥Custom Install

In the Options list, select the items you want installed; clear the items you do not want installed.

A grayed box with a check indicates that only part of the component will be installed. To select all components in the Option list, click Select All.

Options:

☑	Data Access Drivers	6823 K
☐	SQL Server Driver	497 K

Description:

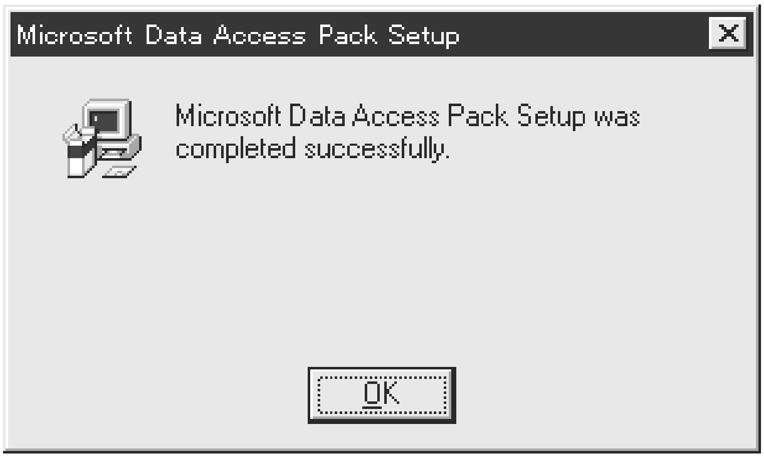
Used to import and export data in a variety of formats.

Folder for Currently Selected Option:

C:\WINNT\System32

Space required on C: 6823 K
Space available on C: 323993 K

(17) Click [OK] to return to the Windows NT desktop, and close all menus.



Microsoft Data Access Pack Setup

Microsoft Data Access Pack Setup was completed successfully.

(18) Remove the QA-WS installation CD-ROM from the CD-ROM drive.

Next

For a new installation from Windows NT ➔ *“13. Installing the QA-WS Application”*

13. Installing the QA-WS Application

In this section, the following abbreviations are used for convenience.

- Windows NT .... NT
- QA-WS application software .... AP

Carry out the procedures in this section when installing Windows NT (NT) or re-installing the application software (AP).

◆◆ CAUTION ◆◆

Although different menus (display design) are used for version A04 or later, the same installation procedure is used.

● The following will be required for the installation:

- QA-WS installation CD-ROM

◆ NOTE ◆

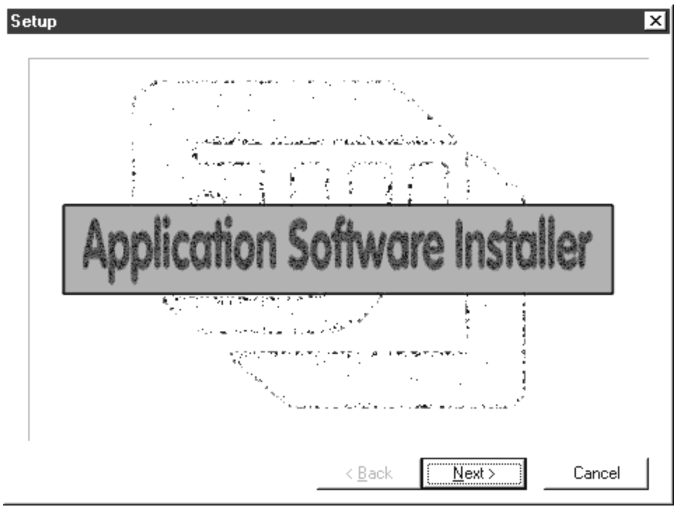
If the video board driver is installed, the 21"CRT monitor may not display images properly due to horizontal synchronization problems until the "Begin Logon" dialog box appears.
This occurs because Windows NT cannot read the video board driver.

◆ NOTES ◆

• When installing the AP again, first uninstall the AP and then perform the following procedure.
• When reinstalling the AP, be sure to back up the required setting information.

(1) Insert the QA-WS installation CD-ROM in the CD-ROM drive.

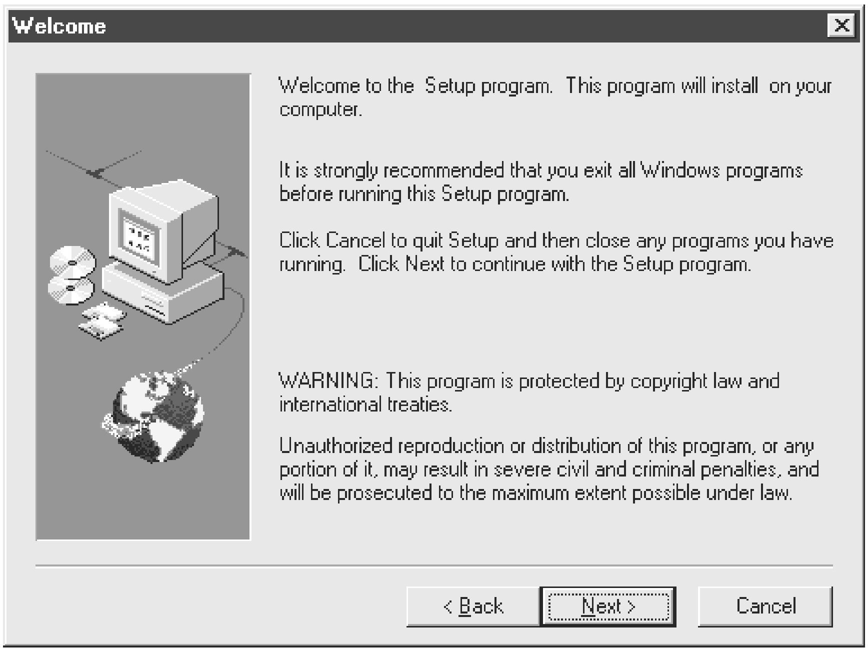
(2) The CD-ROM starts automatically, and the following setup screen appears.
Click [Next>] to proceed.



◆◆ CAUTION ◆◆

The menu shown above will not be displayed when installing A04 or later version software.

(3) When the following welcome screen appears, click [Next>] to proceed.



Welcome

Welcome to the Setup program. This program will install on your computer.

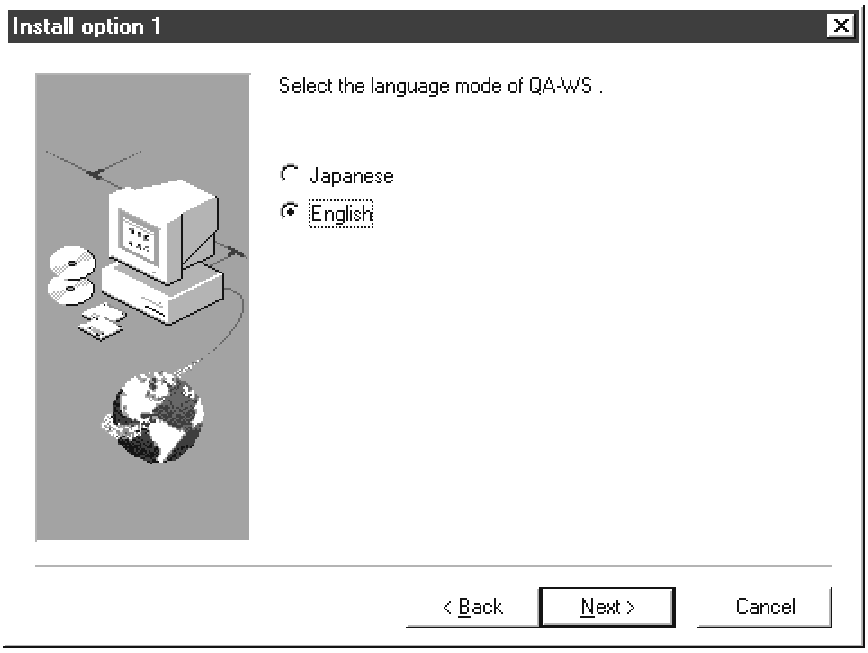
It is strongly recommended that you exit all Windows programs before running this Setup program.

Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

(4) At the following screen, select "English" to install an English AP, then click [Next>].



Install option 1

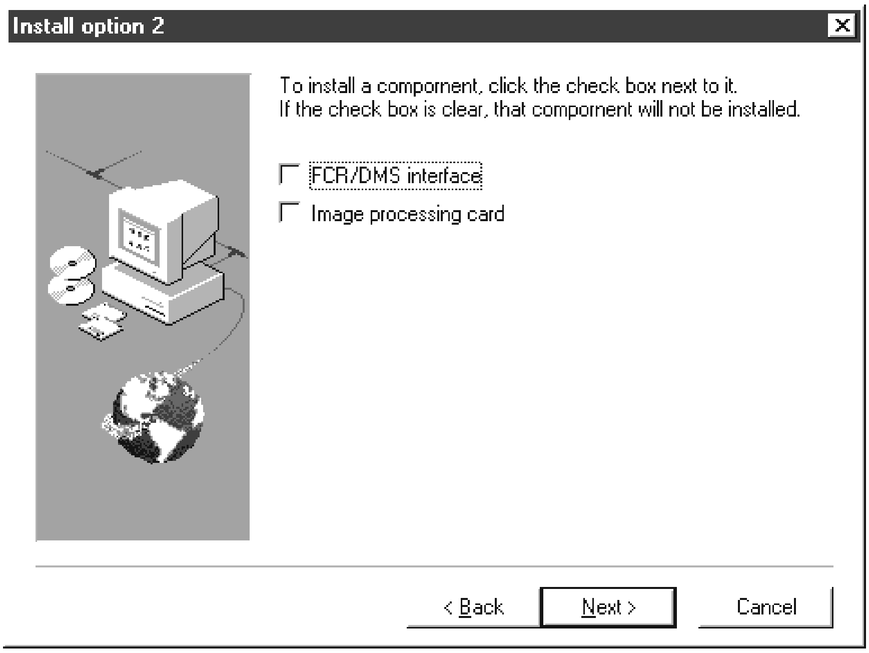
Select the language mode of QA-WS .

○ Japanese

● English

(5) Check (☐ → ☑) the item you are now using and click [Next>].

- ☐ FCR/DMS interface : If using an E-i/f
- ☐ Image processing card : If using an image processing board

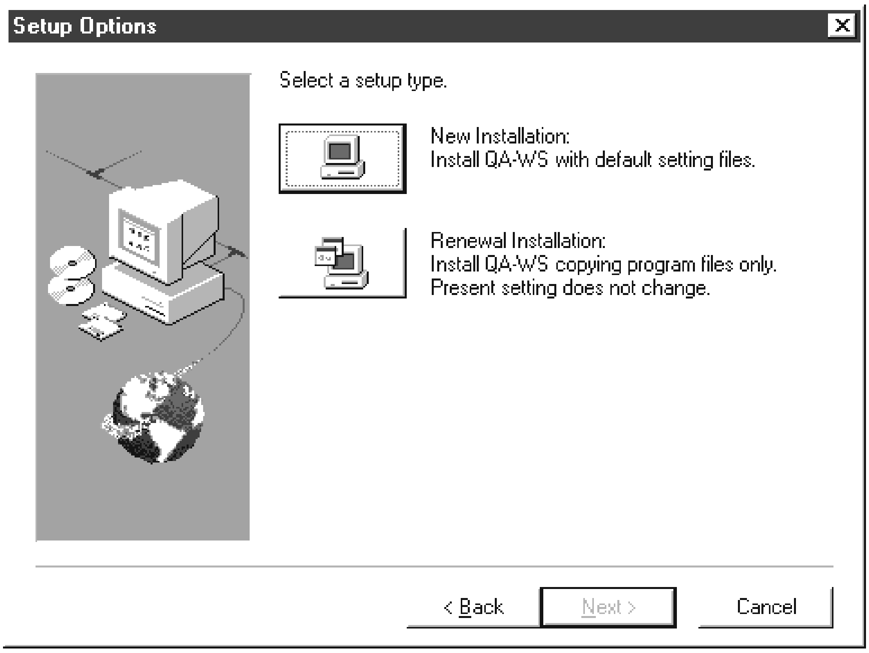


Install option 2

To install a component, click the check box next to it.
If the check box is clear, that component will not be installed.

☐ FCR/DMS interface
☐ Image processing card

(6) Select "New Installation".



Setup Options

Select a setup type.

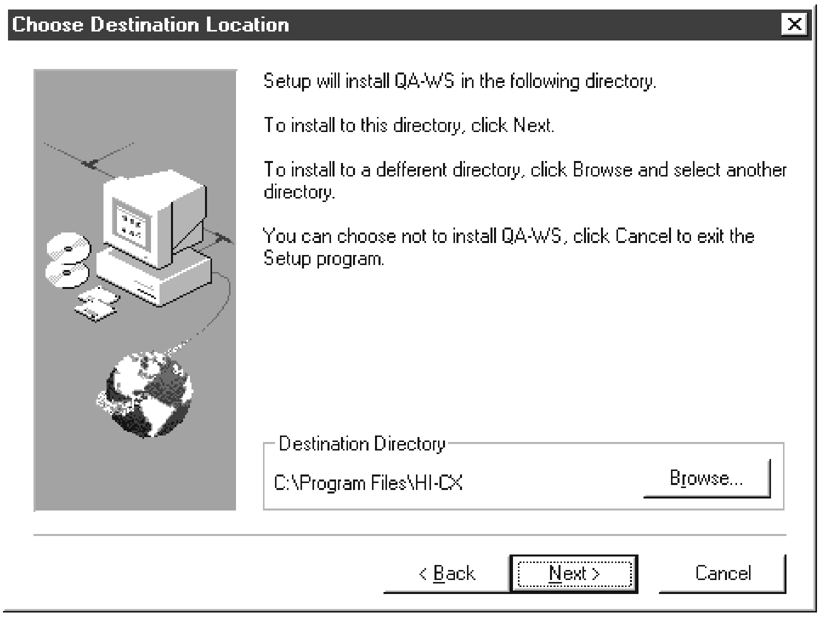
New Installation:
Install QA-WS with default setting files.

Renewal Installation:
Install QA-WS copying program files only.
Present setting does not change.

(7) Setup will confirm the directory to install the AP. Click [Next>].

◆ NOTE ◆

This setting must be C:\Program Files\HI-CX (default directory). Do not change it.



Choose Destination Location

Setup will install QA-WS in the following directory.

To install to this directory, click Next.

To install to a defferent directory, click Browse and select another directory.

You can choose not to install QA-WS, click Cancel to exit the Setup program.

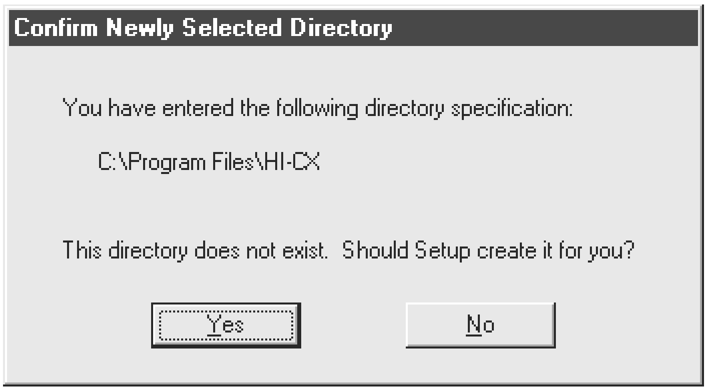
Destination Directory

C:\Program Files\HI-CX

(8) When the following screen appears, click [Yes].

◆ REFERENCE ◆

As the directory (C:\Program Files\HI-CX) does not exist in the HD (Drive C:) for new installations, Setup will confirm if it should create a directory indicated at the following screen.



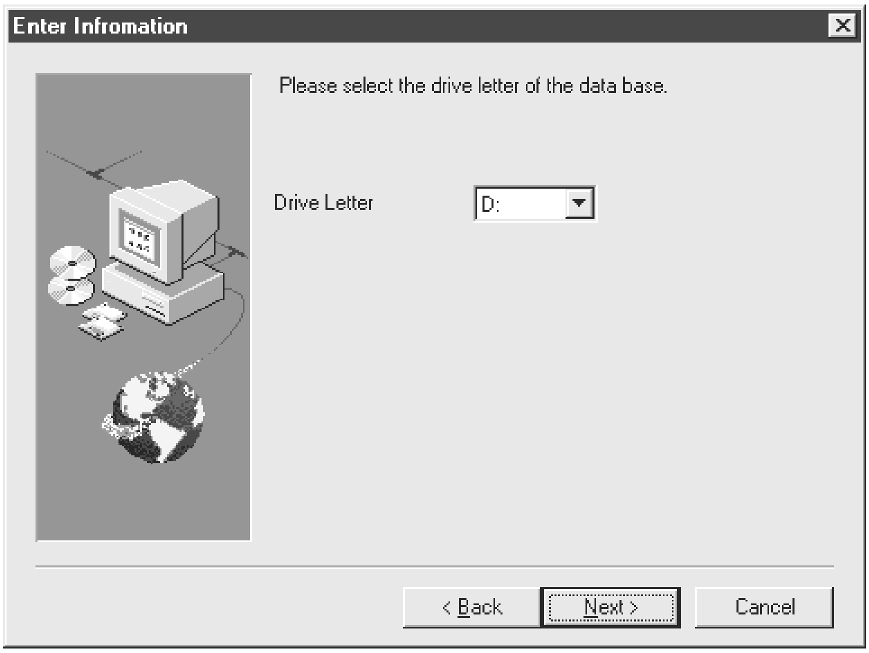
Confirm Newly Selected Directory

You have entered the following directory specification:

C:\Program Files\HI-CX

This directory does not exist. Should Setup create it for you?

(9) Make sure that "Drive Letter" is D:, and click [Next>].



Enter Infromation

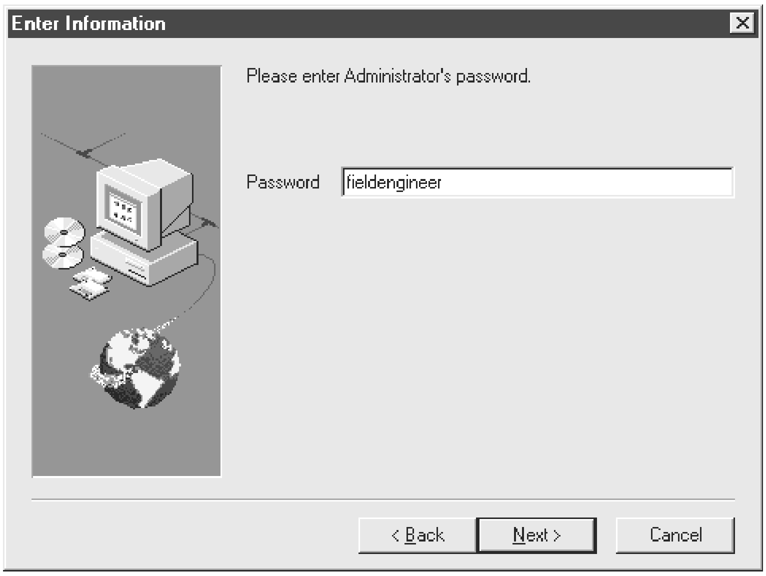
Please select the drive letter of the data base.

Drive Letter D:

(10) Enter the password "fieldengineer" (no quotes, spaces, or upper case) to enter Field Tool, and click [Next>].

◆ *NOTE* ◆

Be sure to enter the correct password (fieldengineer) or it will not match the password at the "Logon Information" screen when NT is restarted, resulting in errors.
If this occurs, enter the correct password (fieldengineer), log onto NT, uninstall the AP and install it again.

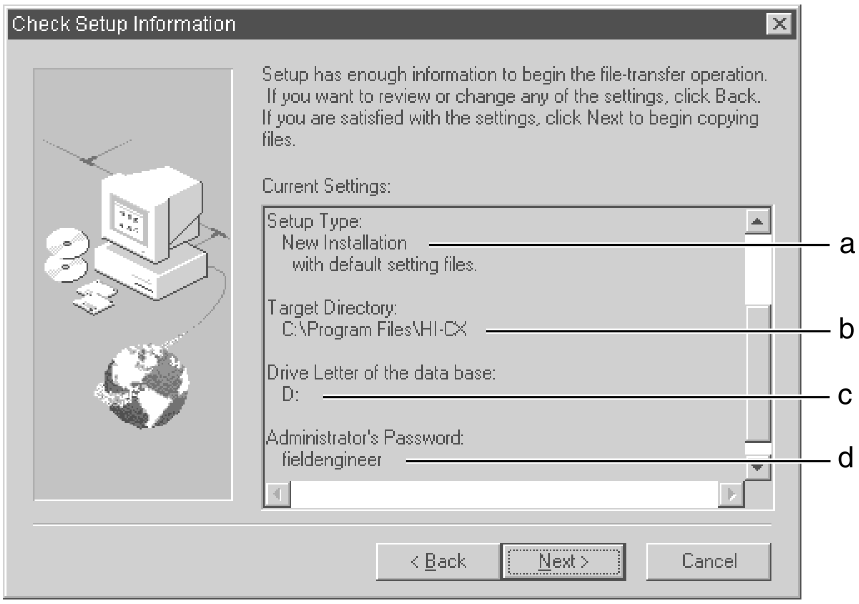


Enter Information

Please enter Administrator's password.

Password fieldengineer

(11) If the settings of "**a**" to "**d**" in the dialog box are exactly as shown below, click [Next>].



Setup has enough information to begin the file-transfer operation. If you want to review or change any of the settings, click Back. If you are satisfied with the settings, click Next to begin copying files.

Current Settings:

Setup Type:
New Installation
with default setting files.

Target Directory:
C:\Program Files\HI-CX

Drive Letter of the data base:
D:

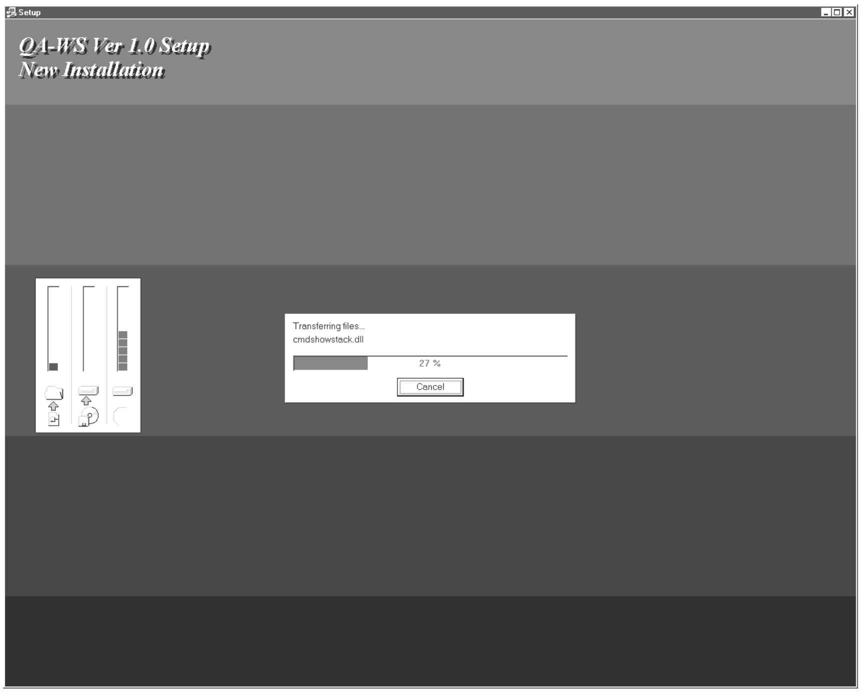
Administrator's Password:
fieldengineer

◆ ***NOTE*** ◆

- *If the settings are incorrect, click [<Back] to return to the previous step.*
- *The language selected will be displayed above "Setup Type".*

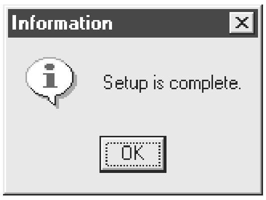
a	New Installation
b	C:\Program Files\HI-CX
c	D:
d	fieldengineer

(12) Installation starts, and indicators tracking progress are displayed.



Transferring files...
cmdshowstack.dll
27 %

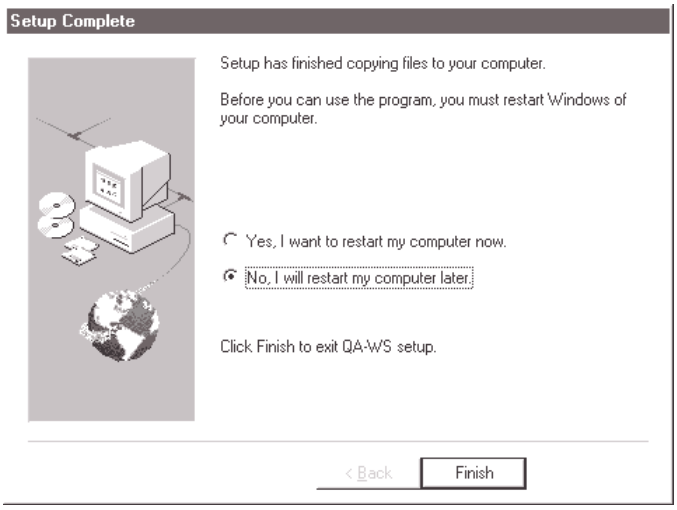
(13) When installation completes, click [OK].



Information

Setup is complete.

(14) When the "Setup Complete" dialog box appears, select the "No, I will restart my computer later" radio button and click [Finish].



Setup Complete

Setup has finished copying files to your computer.

Before you can use the program, you must restart Windows or your computer.

○ Yes, I want to restart my computer now.

● No, I will restart my computer later.

Click Finish to exit QA-WS setup.

(15) To use the English AP (USA), follow the procedure below to install from the AP installation CD-ROM the image parameters used by US users. (This is because the image parameters used by US users are different from others.)

1. Copy all the files located immediately below the "CD-ROM drive:\Setting\Usa" folder onto "C:\ProgramFiles\HI-CX".
2. When handling built-in system images, copy the "Expmenu.prm" file, that is immediately below the "CD-ROM drive:\Setting\Usa\5501" folder, to "C:ProgramFiles\HI-CX", in addition to the files copied in step 1. above.
3. Open the [Properties] window of the files copied in steps above to uncheck "Read-only".

◆ *NOTE* ◆

When the Japanese AP or English AP (other than the USA) is used, do not perform this procedure.

(16) Remove the AP installation CD-ROM from the CD-ROM drive.

Next ▸▸

- *For a new installation from Windows NT when using the DICOM Storage Service ➔ "15. Installing the DICOM Option Key"*
- *For a new installation from Windows NT when neither the DICOM Storage Service nor DICOM Print Service is used ➔ "14. Installing the AP Key"*
- *[IMPORTANT]*
  After the DICOM Option key or AP key has been installed, be sure to reverse the procedure described in "INSTALLATION 7. Backing Up the Environmental Setting Files" to restore various necessary settings.

● Adding the DICOM Print Service to the QA-WS system

To add the DICOM Print Service function to the QA-WS system (upgrading software version from A00 to A01), follow procedures described in "16. Adding the DICOM Print Service to the QA-WS system."

☞ "23. Adding the DICOM Print Service to the QA-WS System"

14. Installing the AP Key

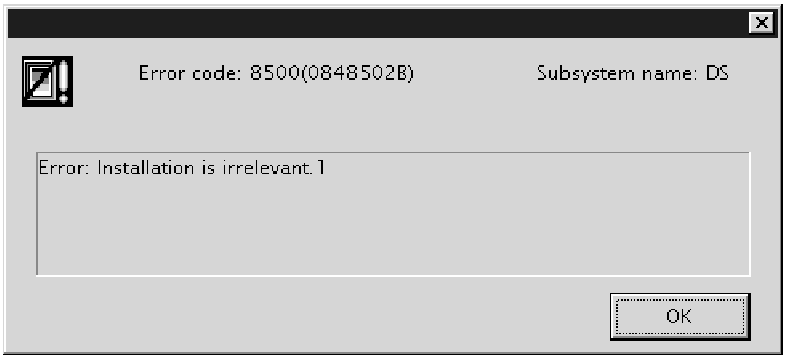
● The following will be required for the installation:

- Key registry CD-ROM

When installing the AP for the first time, perform the following procedure to create the AP key registry (encryption key) and enable use of the AP.

◆ *NOTE* ◆

During installation of the unit or after installing Windows NT, the following error message may appear because the key registry is not installed when the application is started.
In this case, click [OK] and perform the following procedure.



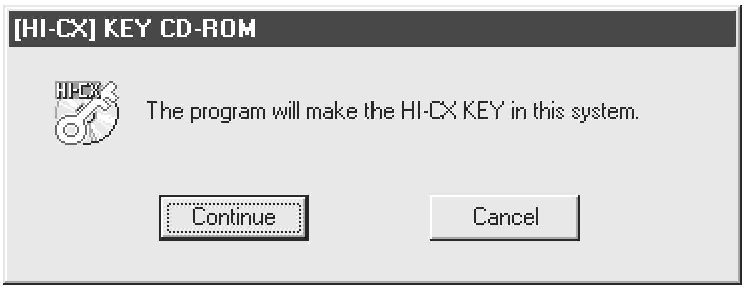
Error code: 8500(0848502B)

Subsystem name: DS

Error: Installation is irrelevant. 1

(1) Insert the CD-ROM with the key registry in the CD-ROM drive.

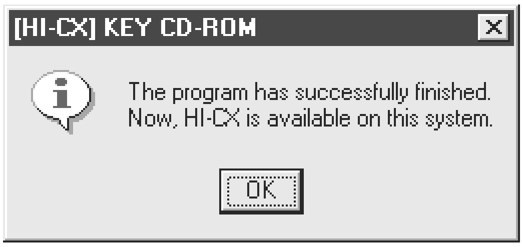
(2) The key registry program starts automatically.
At the start-up screen that appears, click [Continue].



[HI-CX] KEY CD-ROM

The program will make the HI-CX KEY in this system.

(3) Click [OK].



[HI-CX] KEY CD-ROM

The program has successfully finished.
Now, HI-CX is available on this system.

(4) Remove the key registry CD-ROM.

Next ▸▸

For a new installation from Windows NT ➔ *"17. Initializing the Database"*

15. Installing the DICOM Option Key

● The following will be required for the installation:

- Private CR Storage key registry CD-ROM
  Enables Standard CR Storage/Private CR Storage images to be input and output.
- DICOM Print Service key registry CD-ROM
  Enables images to be printed using the DICOM Print Service.

Perform the following procedure to use the DICOM protocol in an application.

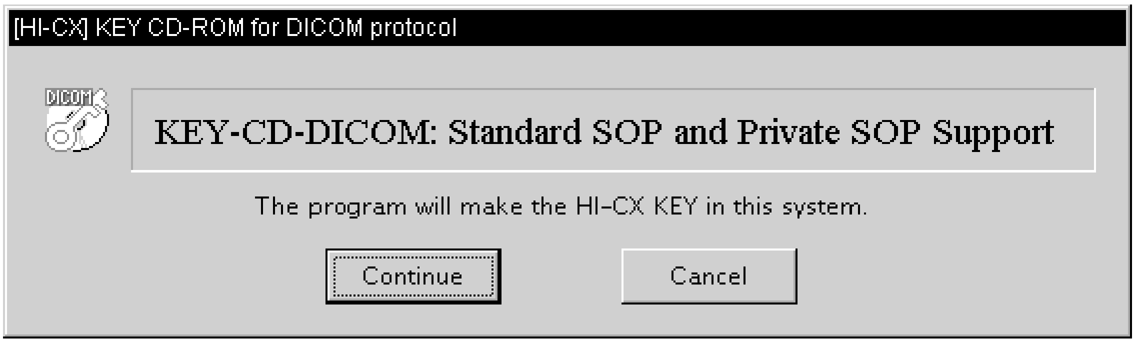
◆ *NOTE* ◆

The AP key will be erased when the DICOM key is installed.
Be sure to install the AP key again after installing the DICOM key.

(1) Insert the DICOM key registry CD-ROM in the CD-ROM drive.

(2) The key registry compilation program starts several seconds later.
Click [Continue] at the following screen.

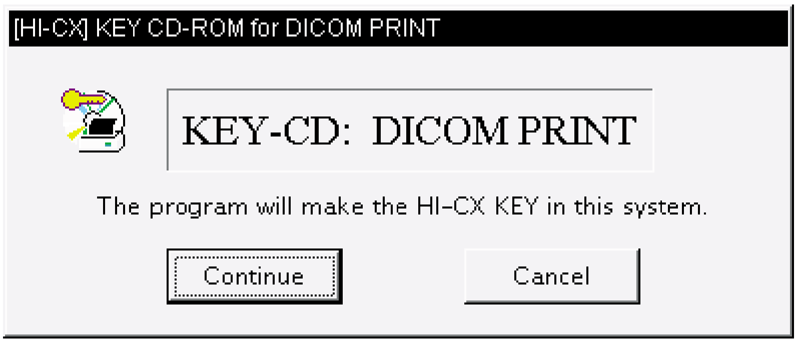
● Private CR Storage key


[HI-CX] KEY CD-ROM for DICOM protocol

KEY-CD-DICOM: Standard SOP and Private SOP Support

The program will make the HI-CX KEY in this system.

● DICOM Print key

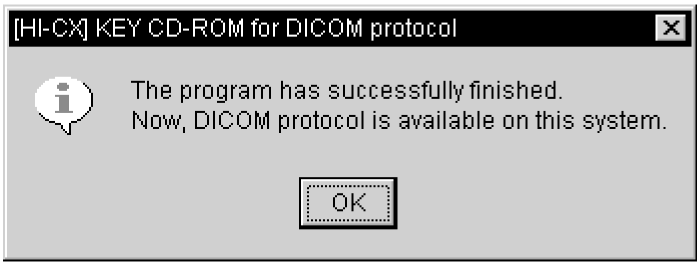

[HI-CX] KEY CD-ROM for DICOM PRINT

KEY-CD: DICOM PRINT

The program will make the HI-CX KEY in this system.

FR1H1024.EPS

(3) When the following message appears, click [OK].



[HI-CX] KEY CD-ROM for DICOM protocol

The program has successfully finished.
Now, DICOM protocol is available on this system.

(4) Remove the DICOM key registry CD-ROM.

Next ▸▸

- *When not using the DICOM Print Service* ➔ *"14. Installing the AP Key"*
- *[IMPORTANT]*
  After the DICOM Option key or AP key has been installed, be sure to reverse the procedure described in "INSTALLATION 7. Backing Up the Environmental Setting Files" to restore various necessary settings.

16. Creating and Formatting the Image Storage Area on D:

◆ NOTE ◆

All existing image data will be deleted when the image storage area (D:) is created or formatted.
To prevent this, back up the image data before proceeding with this procedure, or skip this procedure.

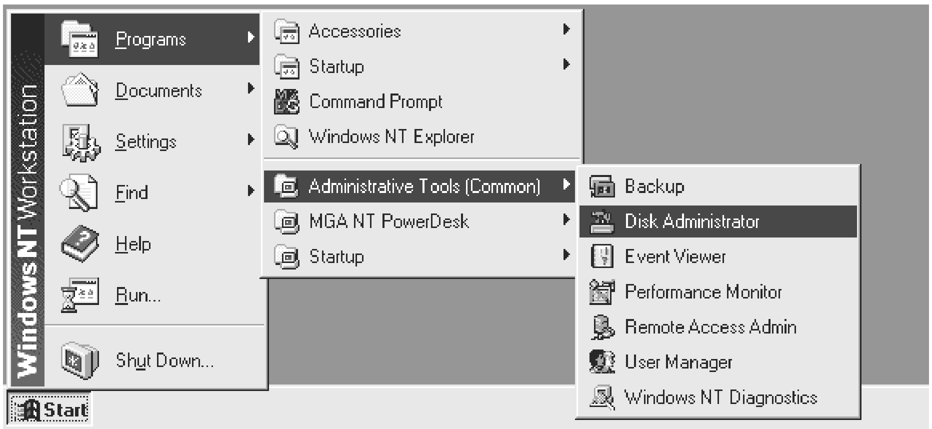
If the image area (D:) partition is deleted when the HDD was replaced or when Windows NT was installed, perform the following procedure to create and enable use of the image area (D:).

◆ REFERENCE ◆

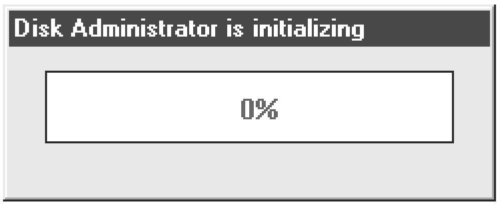
The image storage area (D:) will not be changed just by Windows NT OS installation alone, and all the existing image data are saved.

■ Starting Up the Disk Administrator

(1) Click the [Start] menu at the bottom left of the desktop. Select "Programs" first , then "Administrative Tools (Common)", and finally "Disk Administrator".


Windows NT Workstation
Programs
Documents
Settings
Find
Help
Run...
Shut Down...
Start
Accessories
Startup
Command Prompt
Windows NT Explorer
Administrative Tools (Common)
MGA NT PowerDesk
Startup
Backup
Disk Administrator
Event Viewer
Performance Monitor
Remote Access Admin
User Manager
Windows NT Diagnostics

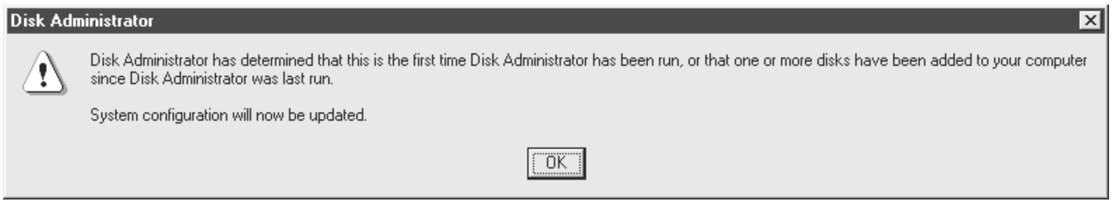
(2) The following screen appears.



Disk Administrator is initializing

◆ NOTE ◆

The following message appears if the “Disk Adminstrator” is started after installing Windows NT or after expanding the HDD. Click [OK] and proceed onto the next step.



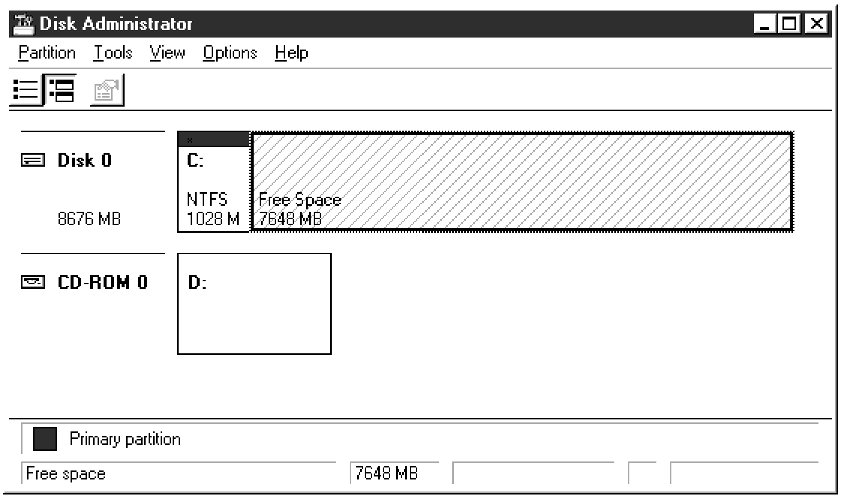
Disk Administrator

Disk Administrator has determined that this is the first time Disk Administrator has been run, or that one or more disks have been added to your computer since Disk Administrator was last run.

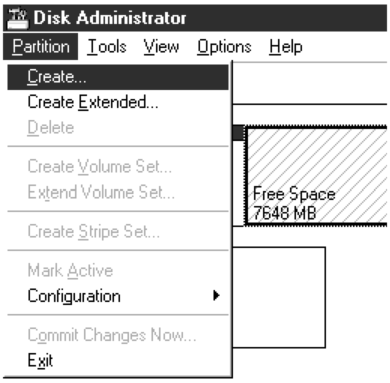
System configuration will now be updated.

■ Creating the Partition

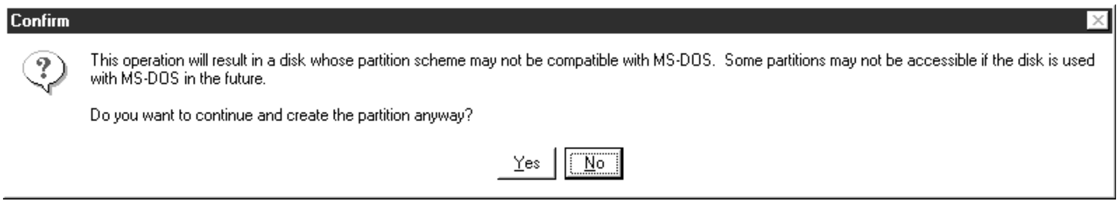
(1) Select the "Free Space" bar.


Disk Administrator
Partition Tools View Options Help
Disk 0
8676 MB
C:
NTFS
1028 M
Free Space
7648 MB
CD-ROM 0
D:
Primary partition
Free space
7648 MB

(2) Click "Create" from the "Partition" menu to select it.


Disk Administrator
Partition Tools View Options Help
Create...
Create Extended...
Delete
Create Volume Set...
Extend Volume Set...
Create Stripe Set...
Mark Active
Configuration
Commit Changes Now...
Exit
Free Space
7648 MB

(3) The confirmation message appears. Click "Yes".

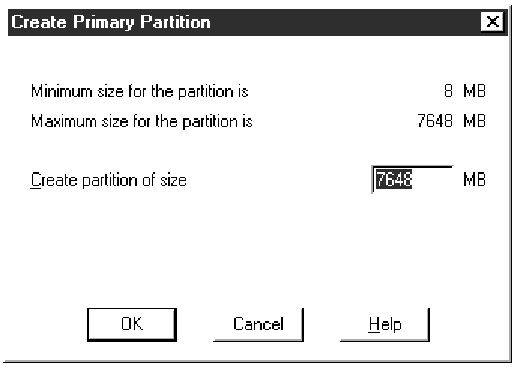

Confirm

This operation will result in a disk whose partition scheme may not be compatible with MS-DOS. Some partitions may not be accessible if the disk is used with MS-DOS in the future.

Do you want to continue and create the partition anyway?

Yes
No

(4) Make sure that the "Create partition of size" matches the size of the "Free Space" and click [OK].


Create Primary Partition

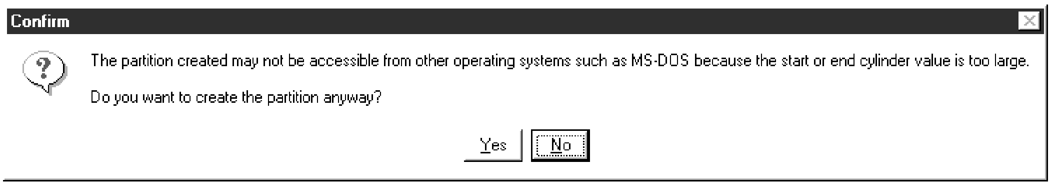
Minimum size for the partition is 8 MB

Maximum size for the partition is 7648 MB

Create partition of size 7648 MB

OK
Cancel
Help

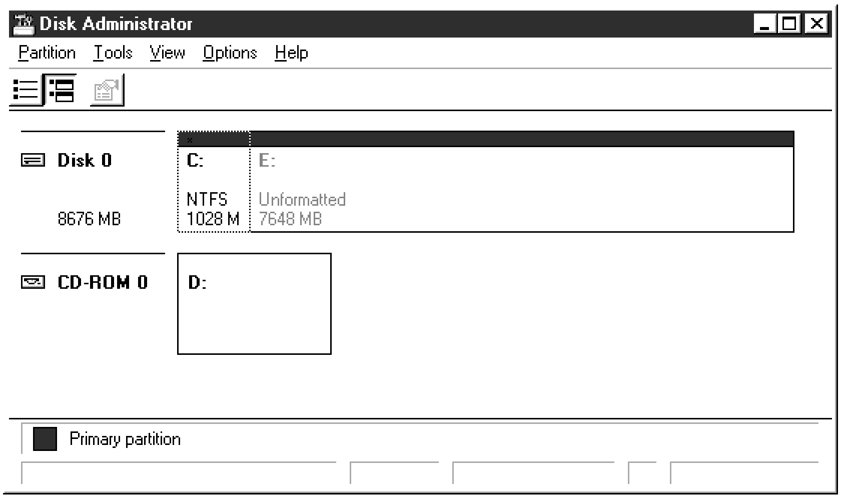
(5) The confirmation message appears. Click [Yes].


Confirm
Yes
No

The partition created may not be accessible from other operating systems such as MS-DOS because the start or end cylinder value is too large.

Do you want to create the partition anyway?

(6) Check that the "Free Space" has been changed to "Unformatted".


Disk Administrator
Partition
Tools
View
Options
Help
Primary partition

Disk 0 8676 MB

C: NTFS 1028 M

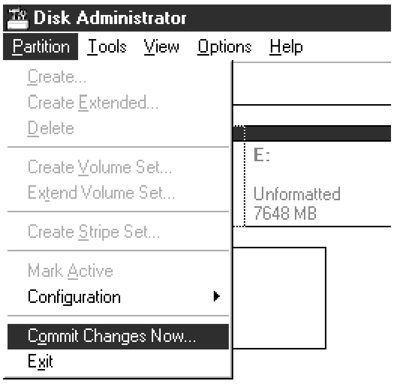
E: Unformatted 7648 MB

CD-ROM 0 D:

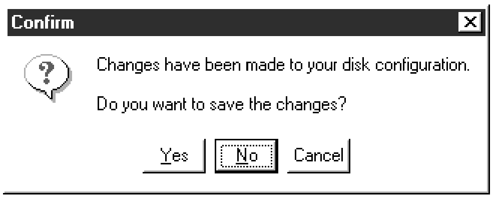
◆ ***NOTE*** ◆

A warning message appears concerning the number of cylinders. Disregard this warning and proceed with the operation.

(7) Click "Commit Changes Now" from the "Partition" menu to select it


Disk Administrator
Partition
Tools
View
Options
Help
Create...
Create Extended...
Delete
Create Volume Set...
Extend Volume Set...
Create Stripe Set...
Mark Active
Configuration
Commit Changes Now...
Exit
E:
Unformatted
7648 MB

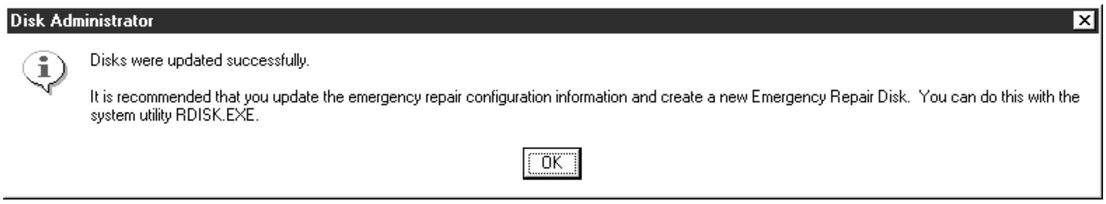
(8) A message appears asking whether to save the change result or not. Click [Yes].


Confirm
Yes
No
Cancel

Changes have been made to your disk configuration.

Do you want to save the changes?

(9) A message like that shown below appears. Click [OK].

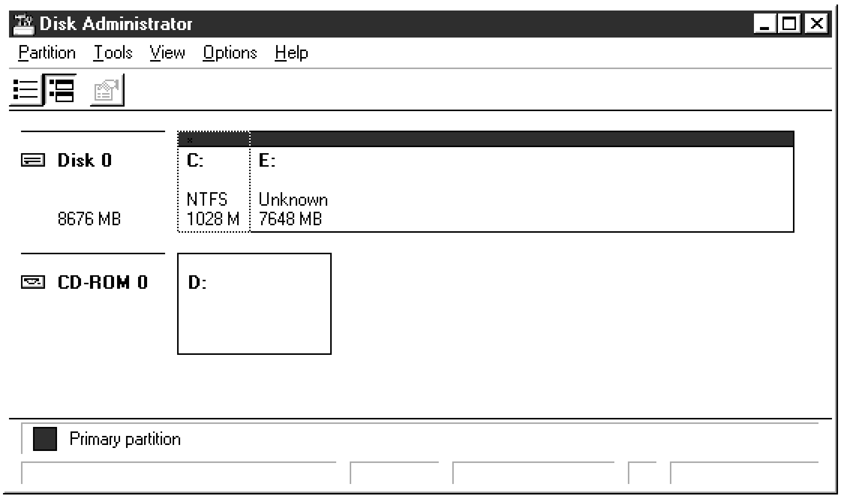


Disks were updated successfully.

It is recommended that you update the emergency repair configuration information and create a new Emergency Repair Disk. You can do this with the system utility RDISK.EXE.

Disk Administrator
OK

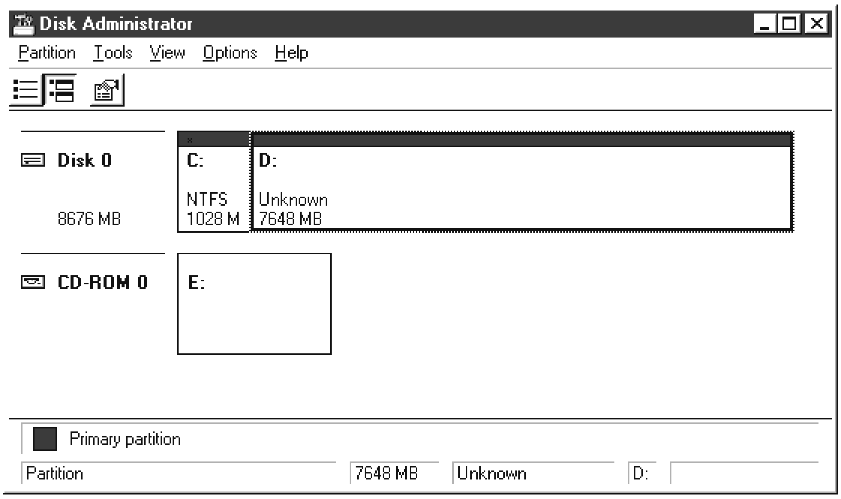
(10) Check that "Unformatted" has been changed to "Unknown".



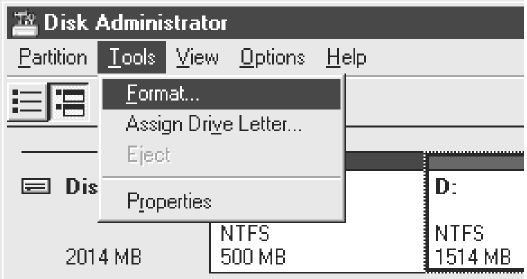
Disk Administrator
Partition
Tools
View
Options
Help
Disk 0
8676 MB
C:
NTFS
1028 M
E:
Unknown
7648 MB
CD-ROM 0
D:
Primary partition

■ Formatting the Partition

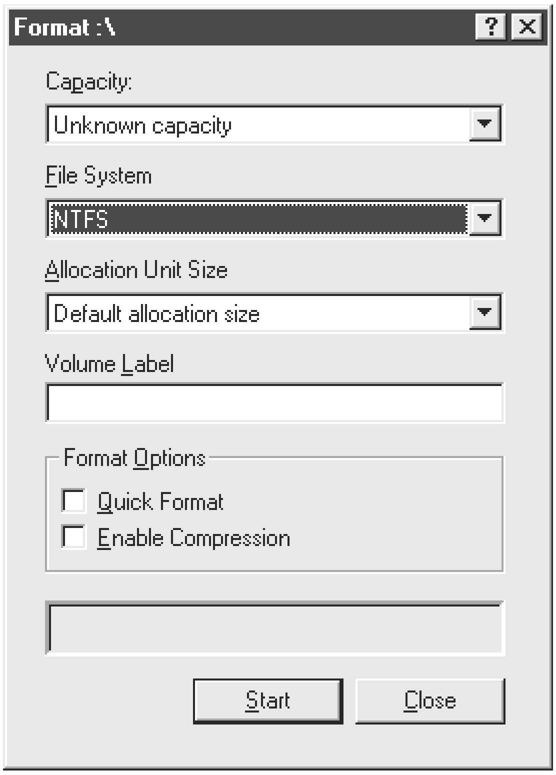
(1) In “Disk Administrator”, click the "Unknown" bar.


Disk Administrator
Partition Tools View Options Help
Disk 0
8676 MB
C:
NTFS
1028 M
D:
Unknown
7648 MB
CD-ROM 0
E:
Primary partition
Partition
7648 MB
Unknown
D:

(2) Click "Tools" on the tool bar and then "Format".


Disk Administrator
Partition Tools View Options Help
Format...
Assign Drive Letter...
Eject
Properties
Dis
2014 MB
NTFS
500 MB
D:
NTFS
1514 MB

(3) When "Format:\" screen appears, make sure that the "File System" box reads NTFS, and click [Start].


Format :\

Capacity: Unknown capacity

File System: NTFS

Allocation Unit Size: Default allocation size

Volume Label:

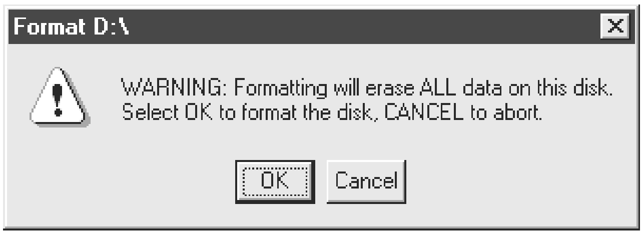
Format Options

☐ Quick Format

☐ Enable Compression

Start
Close

(4) When the following screen appears, click [OK].

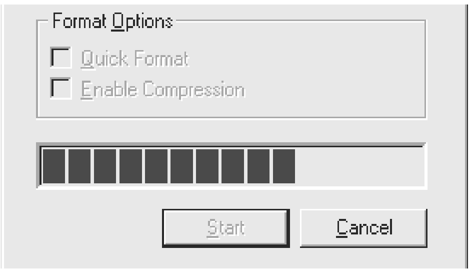


Format D:\

WARNING: Formatting will erase ALL data on this disk.
Select OK to format the disk, CANCEL to abort.

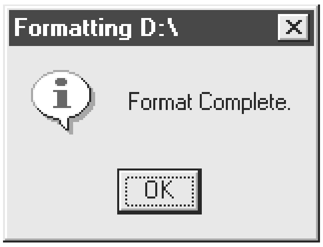
◆ REFERENCE ◆

Format will take 10 to 15 minutes.
The status bar below the "Format D:\" dialog box tracks the formatting progress.



Format Options
☐ Quick Format
☐ Enable Compression
Start
Cancel

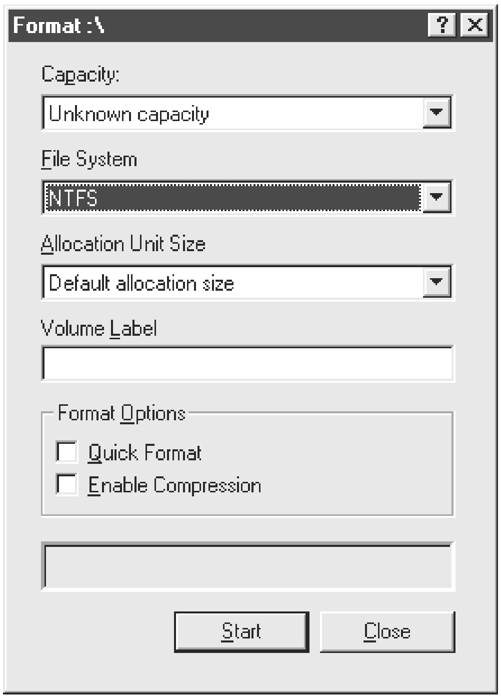
(5) When the following screen appears, click [OK].



Formatting D:\

Format Complete.

(6) Click [Close] to close the "Format D: \" screen.



Format :\

Capacity: Unknown capacity

File System: NTFS

Allocation Unit Size: Default allocation size

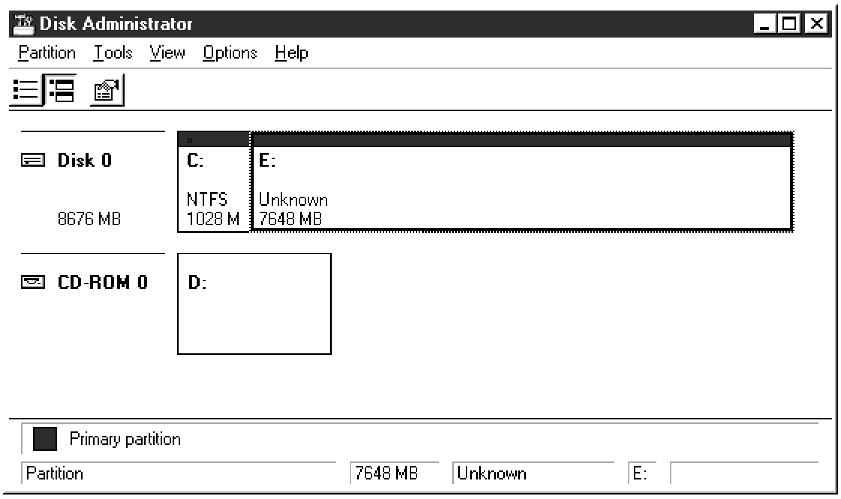
Volume Label:

Format Options
☐ Quick Format
☐ Enable Compression
Start
Close

(7) Make sure that “Unknown capacity” has been changed to “NTFS”.

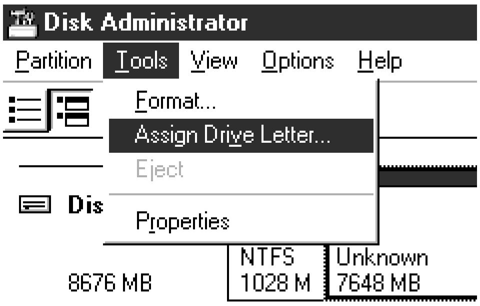
■ Assigning Drive Letters

(1) Select drive for the image area.

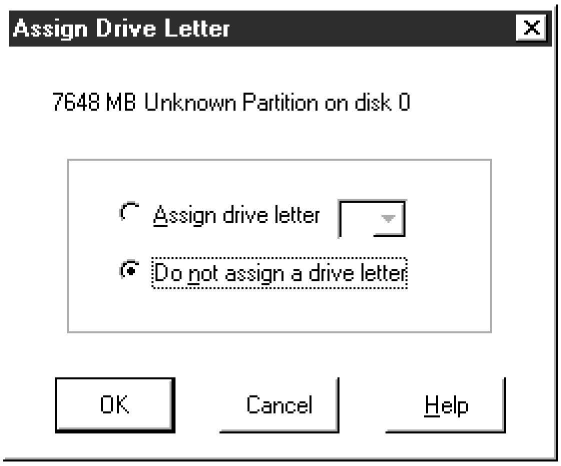

Disk Administrator
Partition
Tools
View
Options
Help
Disk 0
8676 MB
C:
NTFS
1028 M
E:
Unknown
7648 MB
CD-ROM 0
D:
Primary partition

Partition	7648 MB	Unknown	E:

(2) Click "Assign Drive Letter" on the "Tool" menu to select it.


Disk Administrator
Partition
Tools
View
Options
Help
Format...
Assign Drive Letter...
Eject
Properties
Dis
8676 MB
NTFS
1028 M
Unknown
7648 MB

(3) Select "Do not assign a drive letter" and click [OK].


Assign Drive Letter

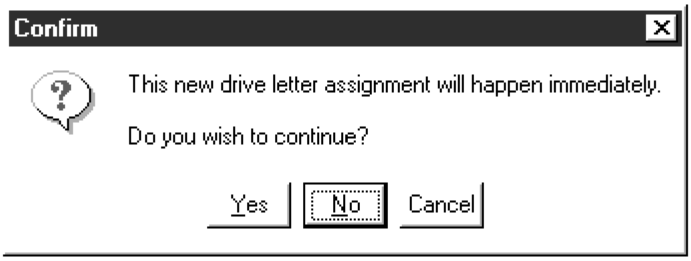
7648 MB Unknown Partition on disk 0

○ Assign drive letter

● Do not assign a drive letter

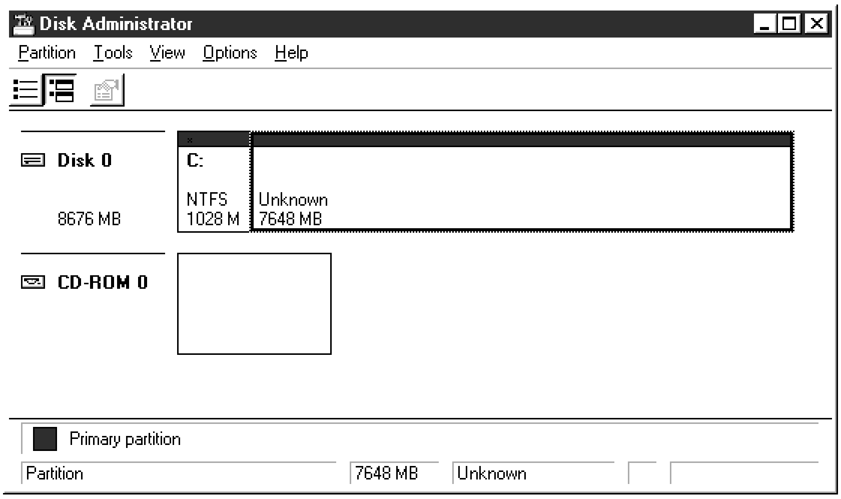
OK
Cancel
Help

(4) The confirmation message appears. Click [Yes].

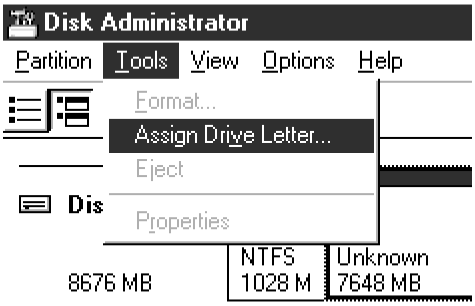

Confirm
This new drive letter assignment will happen immediately.
Do you wish to continue?
Yes
No
Cancel

(5) Following the same procedures, select "Do not assign a drive letter" for the drives other than C.

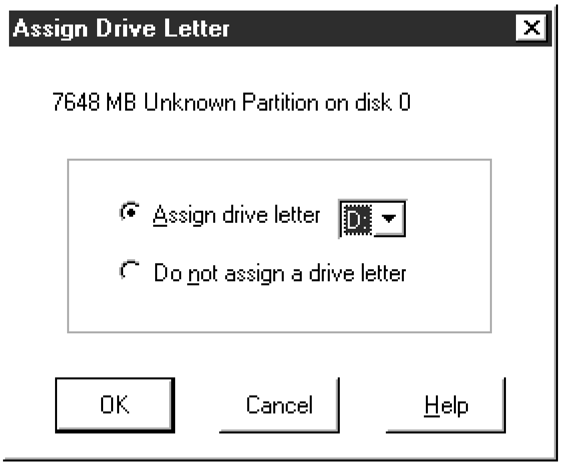
(6) Select drive for the image area.


Disk Administrator
Partition Tools View Options Help
Disk 0
8676 MB
C:
NTFS
1028 M
Unknown
7648 MB
CD-ROM 0
Primary partition
Partition
7648 MB
Unknown

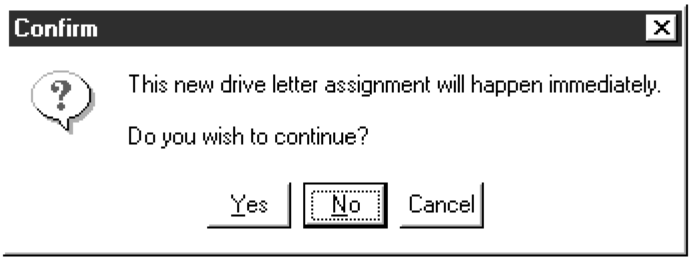
(7) Click "Assign Drive Letter" on the "Tool" menu to select it.


Disk Administrator
Partition Tools View Options Help
Format...
Assign Drive Letter...
Eject
Properties
Dis
8676 MB
NTFS
1028 M
Unknown
7648 MB

(8) Select "Assign drive letter" and click [OK].


Assign Drive Letter
7648 MB Unknown Partition on disk 0
● Assign drive letter D:
○ Do not assign a drive letter
OK
Cancel
Help

(9) The confirmation message appears. Click [Yes].



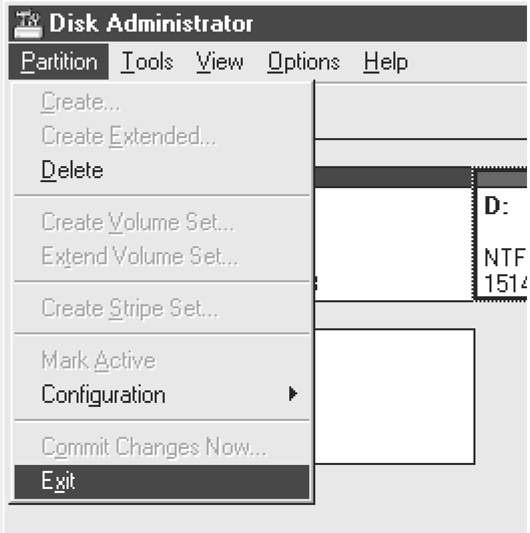
This new drive letter assignment will happen immediately.

Do you wish to continue?

(10) Following the same procedures, assign drive letters to the remaining drives.
Check that “D: Unknown” has beenchanged to “NTFS”.

■ Exiting from the Disk Administrator

(1) Click "Exit" on the "Partition" menu to select it.


Disk Administrator
Partition
Tools
View
Options
Help
Create...
Create Extended...
Delete
Create Volume Set...
Extend Volume Set...
Create Stripe Set...
Mark Active
Configuration
Commit Changes Now...
Exit
D:
NTF
151

◆ **NOTE** ◆

If a message appears asking whether to save the change result or not, click "Yes."

Next ▸▸

For a new installation from Windows NT ➔ *"12. Installing the ODBC Driver"*

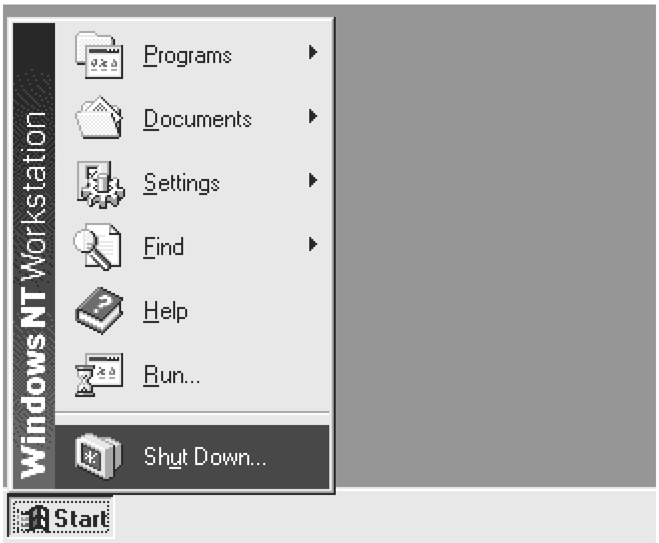
17. Initializing the Database

◆ ***NOTE*** ◆

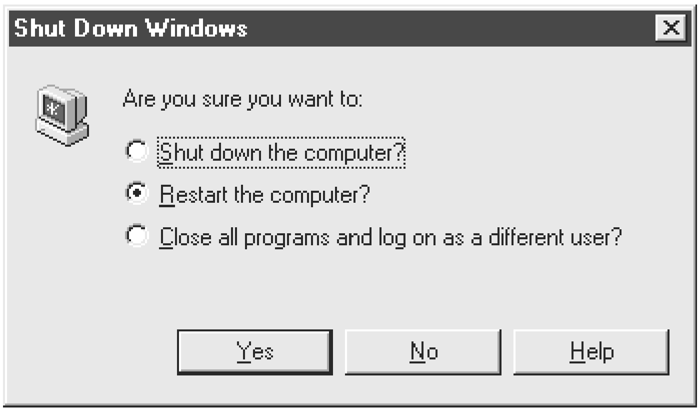
Initializing the database will disable display of existing image data.

If the image area (D:) partition is erased when the HDD was replaced or when Windows NT was installed, perform the following procedure to enable use of the image area (D:) as the database.

(1) Click [Start] and then "Shut Down".


Windows NT Workstation
Programs
Documents
Settings
Find
Help
Run...
Shut Down...
Start

(2) At the following screen, click "Restart the computer?" and then [Yes].

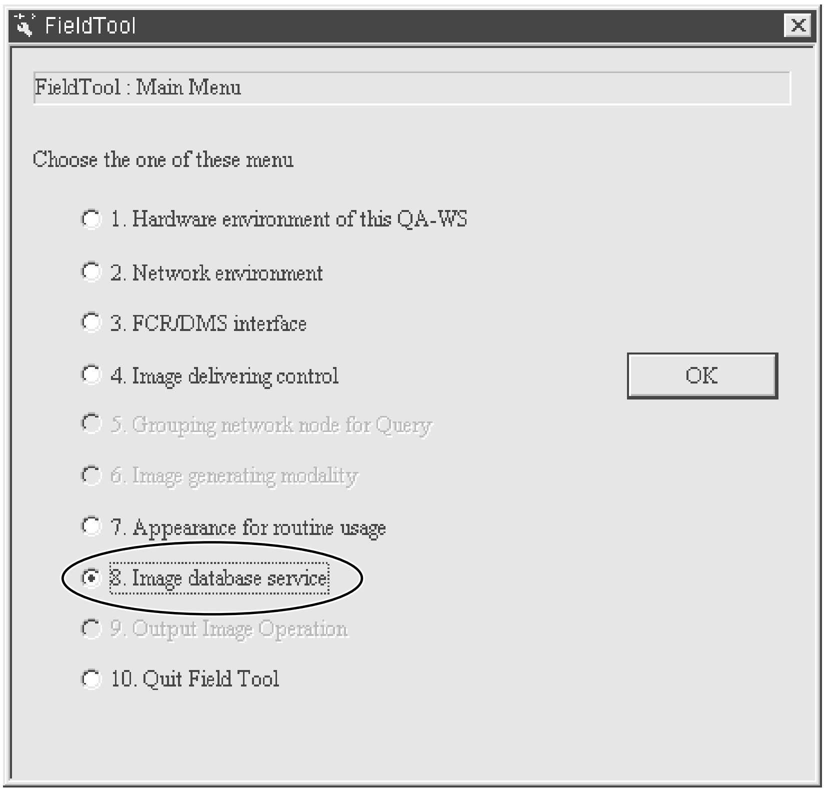

Shut Down Windows

Are you sure you want to:

○ Shut down the computer?
● Restart the computer?
○ Close all programs and log on as a different user?

(3) When the [Start] bar appears at the bottom, press the <Shift> key continuously to log onto Field Tool.

(4) Click the "8. Image database service" radio button and click [OK].

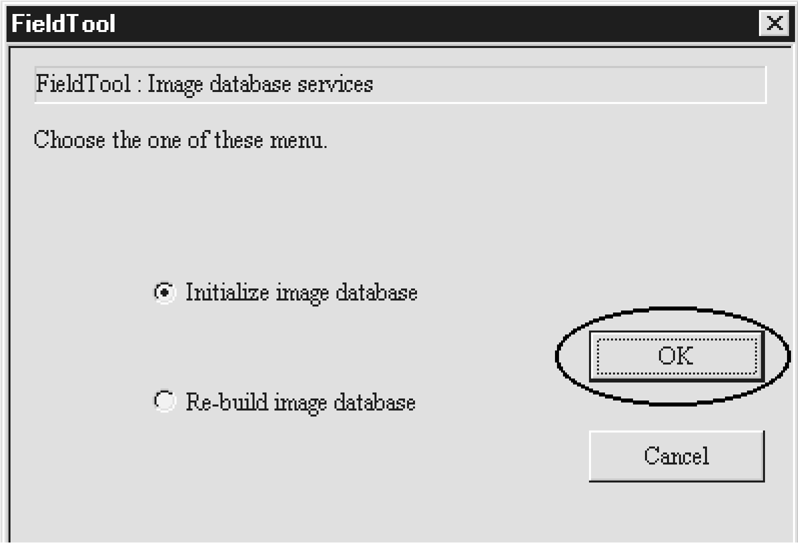


FieldTool : Main Menu

Choose the one of these menu

FieldTool
○ 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
● 8. Image database service
○ 9. Output Image Operation
○ 10. Quit Field Tool
OK

(5) Click the "Initialize image database" radio button and click [OK].

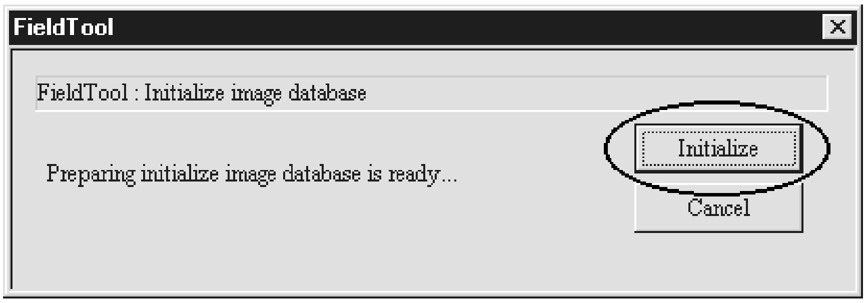


FieldTool : Image database services

Choose the one of these menu.

FieldTool
● Initialize image database
○ Re-build image database
OK
Cancel

(6) Click [Initialize] to proceed with the initialization process.

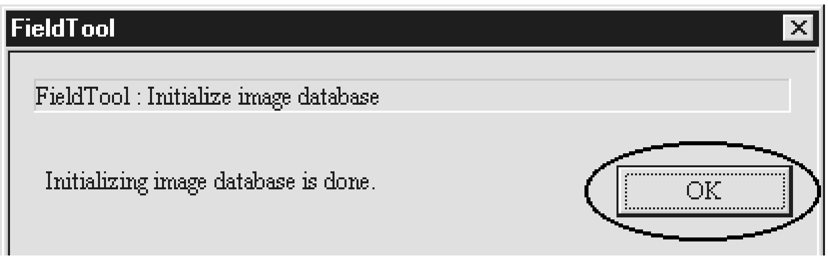


FieldTool : Initialize image database

Preparing initialize image database is ready...

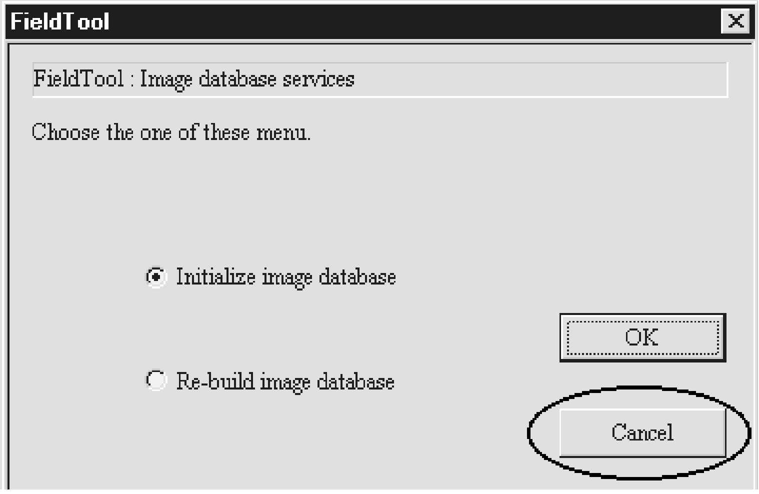
FieldTool
Initialize
Cancel

(7) Wait for the initialization process to complete and click [OK] in the dialog box that appears.



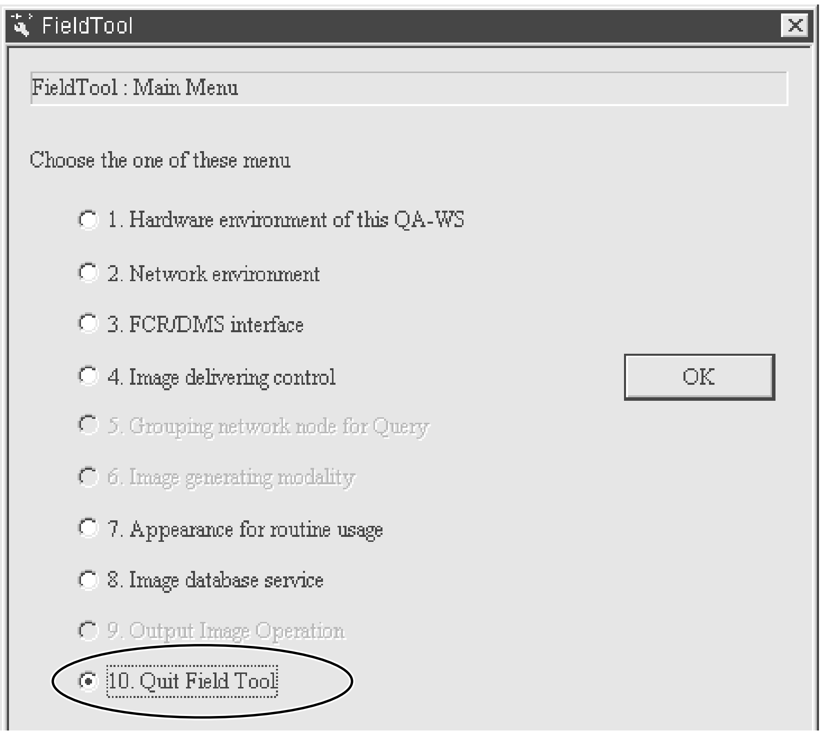
FieldTool
FieldTool : Initialize image database
Initializing image database is done.
OK

(8) The "Image database services" dialog box returns. Click [Cancel].



FieldTool
FieldTool : Image database services
Choose the one of these menu.
● Initialize image database
○ Re-build image database
OK
Cancel

(9) Return to Field Tool, click "10. Quit Field Tool" and then [OK].



FieldTool
FieldTool : Main Menu
Choose the one of these menu
○ 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
○ 8. Image database service
○ 9. Output Image Operation
● 10. Quit Field Tool
OK

(10) Restart the unit.

Next ▸▸

- *Backing up image data when Windows NT has newly been installed*
  ➔ Restore image data. “21. Backing Up Image Data”
- *Image data not backed up when Windows NT has newly been installed* *➔ <Quitting>*

18. Uninstalling the Video Board Driver

Described below is the procedure used for MGA video board driver uninstallation.

● Connecting the VGA Monitor (Tool)

Uninstalling the video board driver (VD) according to the following procedure disables the use of the 21" CRT monitor.

For this, connect the optional VGA monitor (1600 x 1200 or 1280 x 1024 model with a horizontal 75 Hz vertical 93 kHz refresh rate) to the connector on the video board for the 21" CRT monitor.

(1) Turn ON the power switch of the VGA monitor and control unit.

(2) Start the unit.

◆ NOTE ◆

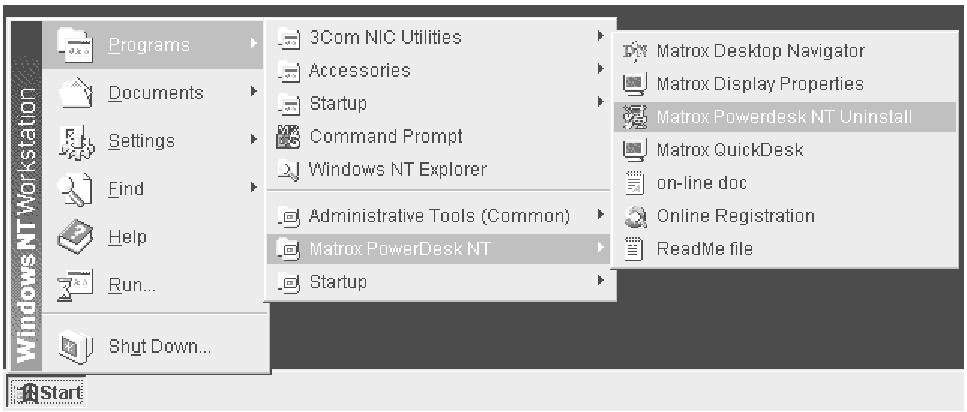
- *After starting the unit, the AP will start automatically after some time.*
  To prevent this, log onto Field Tool.
- *If you could not log onto Field Tool, end the AP and repeat from step (2) again.*

Logging onto Field Tool

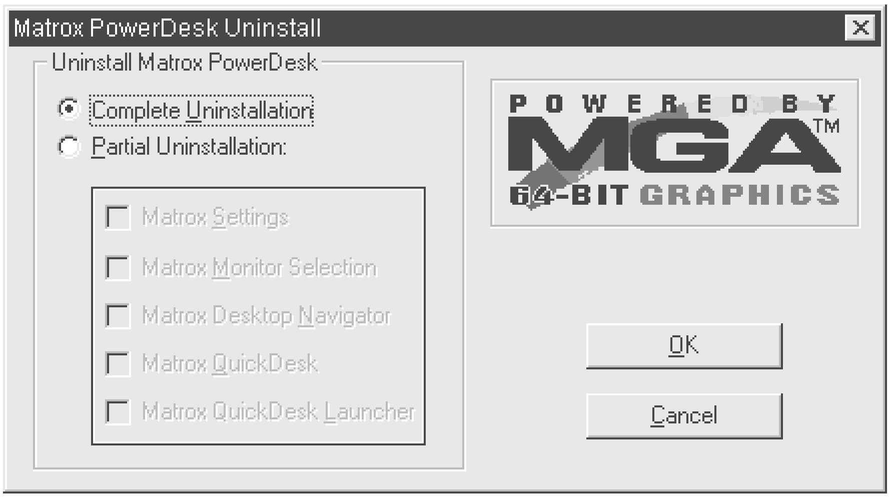
- The Start bar appears at the bottom of the screen when the unit is started.
- Continue pressing the <Shift> key until the Field Tool screen appears.

(3) Select "10. Quit Field Tool" at the Field Tool: Main Menu and click [OK].

(4) Click [Start] at the bottom left of the Windows NT desktop.
Select "Programs", then "Matrox PowerDesk NT", and "Matrox Powerdesk NT Uninstall".


Windows NT Workstation
Programs
Documents
Settings
Find
Help
Run...
Shut Down...
Start
3Com NIC Utilities
Accessories
Startup
Command Prompt
Windows NT Explorer
Administrative Tools (Common)
Matrox PowerDesk NT
Startup
Matrox Desktop Navigator
Matrox Display Properties
Matrox Powerdesk NT Uninstall
Matrox QuickDesk
on-line doc
Online Registration
ReadMe file

(5) Select "Complete Uninstallation" and then click [OK].



Matrox PowerDesk Uninstall

Uninstall Matrox PowerDesk

● Complete Uninstallation

○ Partial Uninstallation:

☐ Matrox Settings

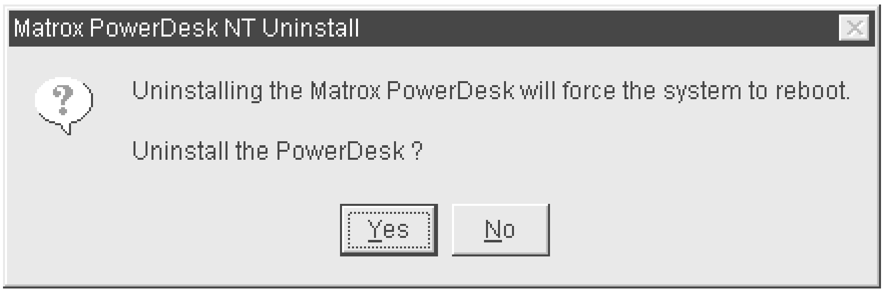
☐ Matrox Monitor Selection

☐ Matrox Desktop Navigator

☐ Matrox QuickDesk

☐ Matrox QuickDesk Launcher

(6) Click [Yes].

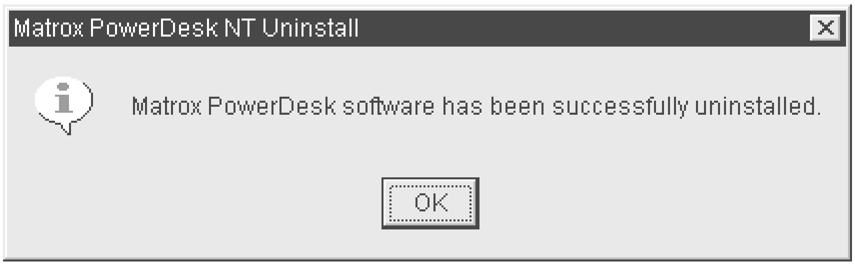


Matrox PowerDesk NT Uninstall

Uninstalling the Matrox PowerDesk will force the system to reboot.

Uninstall the PowerDesk ?

(7) Click [OK].



Matrox PowerDesk NT Uninstall

Matrox PowerDesk software has been successfully uninstalled.

(8) The unit restarts.
If started this way, the AP will start without the MGA video board driver.
To prevent the AP from starting, log onto the Field Tool.

Logging onto Field Tool

- The Start bar appears at the bottom of the screen when the unit is started.
- Continue pressing the <Shift> key until the Field Tool screen appears.

(9) Select "10. Quit Field Tool" at the Field Tool main menu and click [OK].

Next ▸▸

• When using the MGA video board ➔ *"11. Installing the MGA Video Board Driver"*

• When replacing with the G400 video board ➔ *"9. Installing the G400 Video Board Driver"*

• When replacing with the SPECTRA video board
➔ *"10. Installing the SPECTRA Video Board Driver"*

19. Uninstalling the QA-WS Application

Perform this procedure to uninstall the QA-WS application.
There is no need to connect the VGA monitor in place of the 21" CRT monitor.

(1) Turn ON the power switch of the 21" CRT monitor and control unit.

(2) Start the unit.

◆ ***NOTE*** ◆

- *After starting the unit, the AP will start automatically after some time. To prevent this, log onto Field Tool.*
- *If you could not log onto Field Tool, end the AP and repeat from Step (2) again.*

Logging onto Field Tool

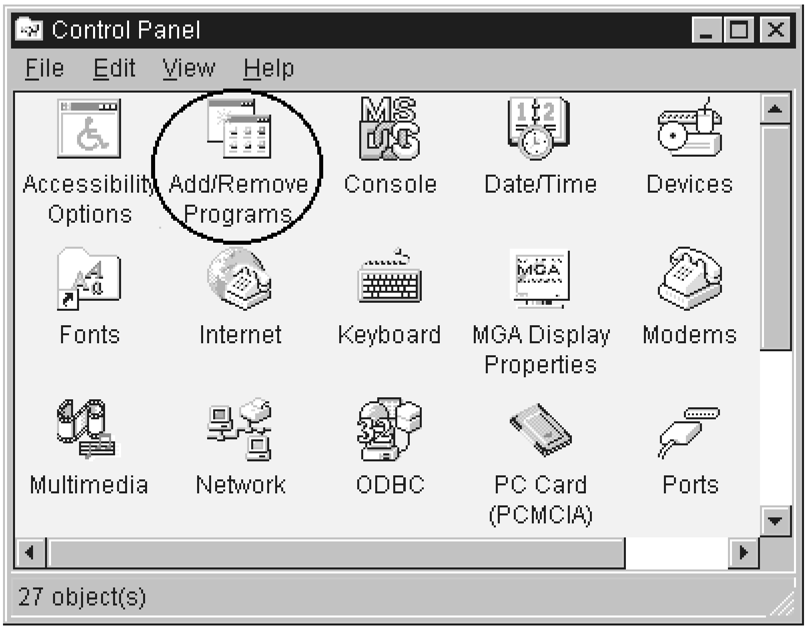
- The Start bar appears at the bottom of the screen when the unit is started.
- Continue pressing the <Shift> key until the Field Tool screen appears.

(3) Select "9. Quit Field Tool" at the Field Tool: Main Menu and click [OK].

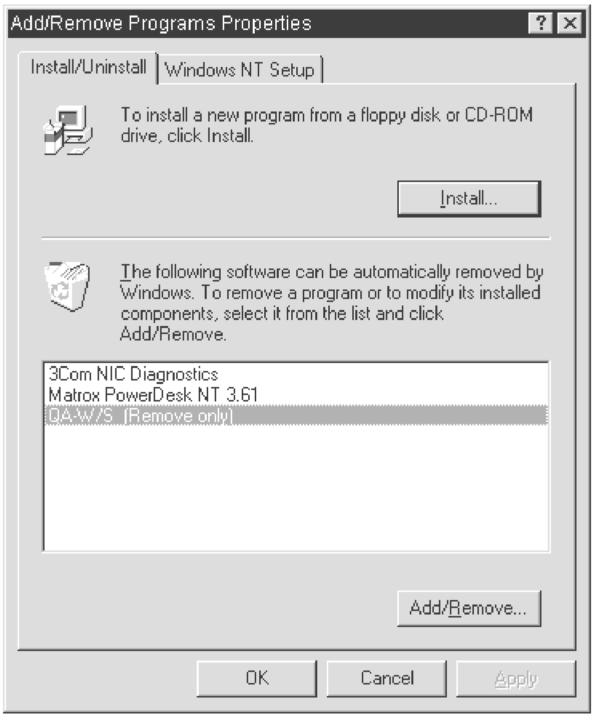
(4) Double-click "My Computer" on the Windows NT desktop.

(5) Double-click "Control Panel".

(6) Double-click "Add/Remove Programs".


Control Panel
File
Edit
View
Help
Accessibility Options
Add/Remove Programs
Console
Date/Time
Devices
Fonts
Internet
Keyboard
MGA Display Properties
Modems
Multimedia
Network
ODBC
PC Card (PCMCIA)
Ports
27 object(s)

(7) At the following dialog box that appears, select "QA-WS..." and click [Add/Remove].



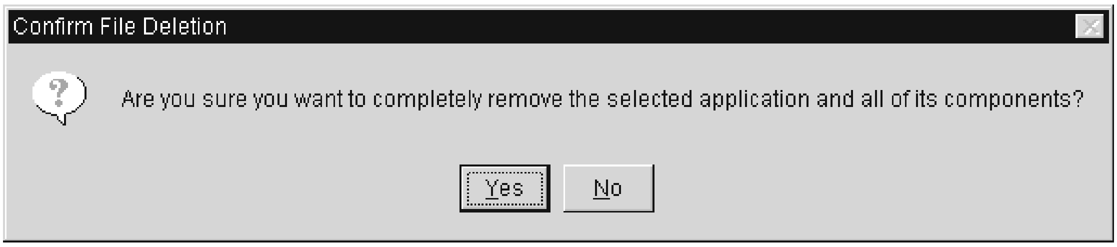
Add/Remove Programs Properties

To install a new program from a floppy disk or CD-ROM drive, click Install.

The following software can be automatically removed by Windows. To remove a program or to modify its installed components, select it from the list and click Add/Remove.

3Com NIC Diagnostics
Matrox PowerDesk NT 3.61
QA-W/S (Remove only)

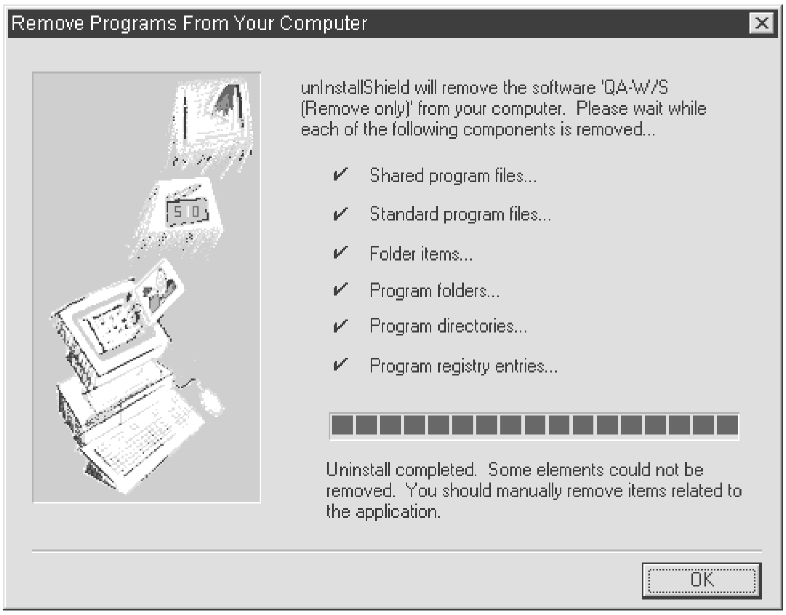
(8) Click [Yes].



Confirm File Deletion

Are you sure you want to completely remove the selected application and all of its components?

(9) A screen tracking the progress of the uninstallation appears.
When the process completes, click [OK].



Remove Programs From Your Computer

unInstallShield will remove the software 'QA-W/S (Remove only)' from your computer. Please wait while each of the following components is removed...

✓ Shared program files...
✓ Standard program files...
✓ Folder items...
✓ Program folders...
✓ Program directories...
✓ Program registry entries...

Uninstall completed. Some elements could not be removed. You should manually remove items related to the application.

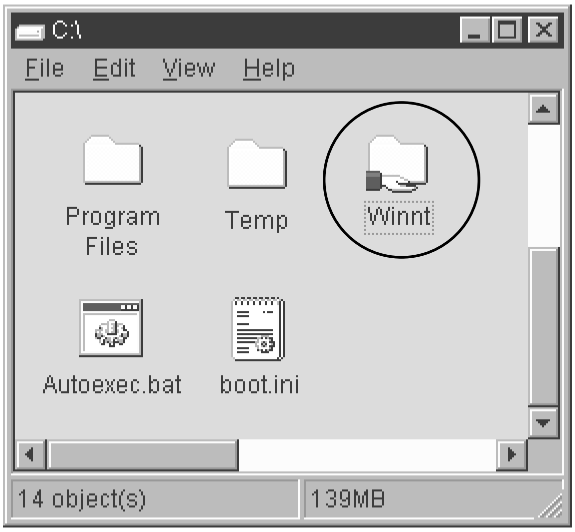
Next ▶▶

"13. Installing the QA-WS Application"

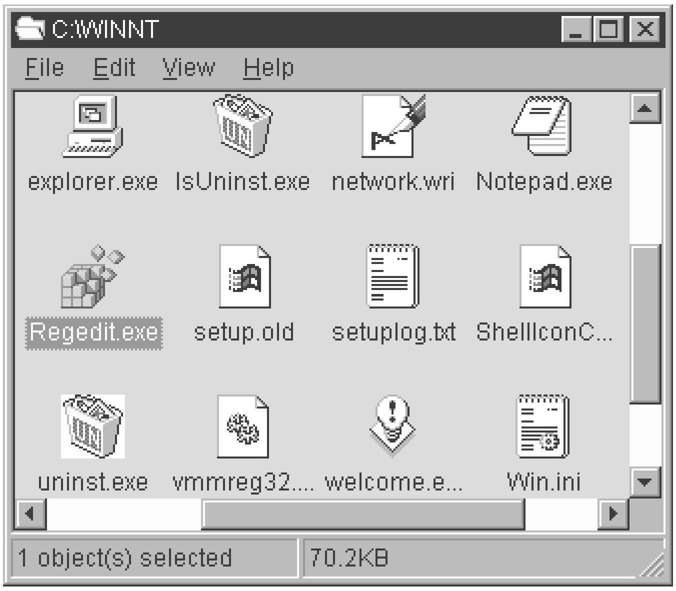
20. Uninstalling the DICOM Key

Perform the following procedure to uninstall the DICOM key.

(1) Double-click the "Winnt" folder in the "C: " drive.


C:\
File Edit View Help
Program Files
Temp
Winnt
Autoexec.bat
boot.ini
14 object(s)
139MB

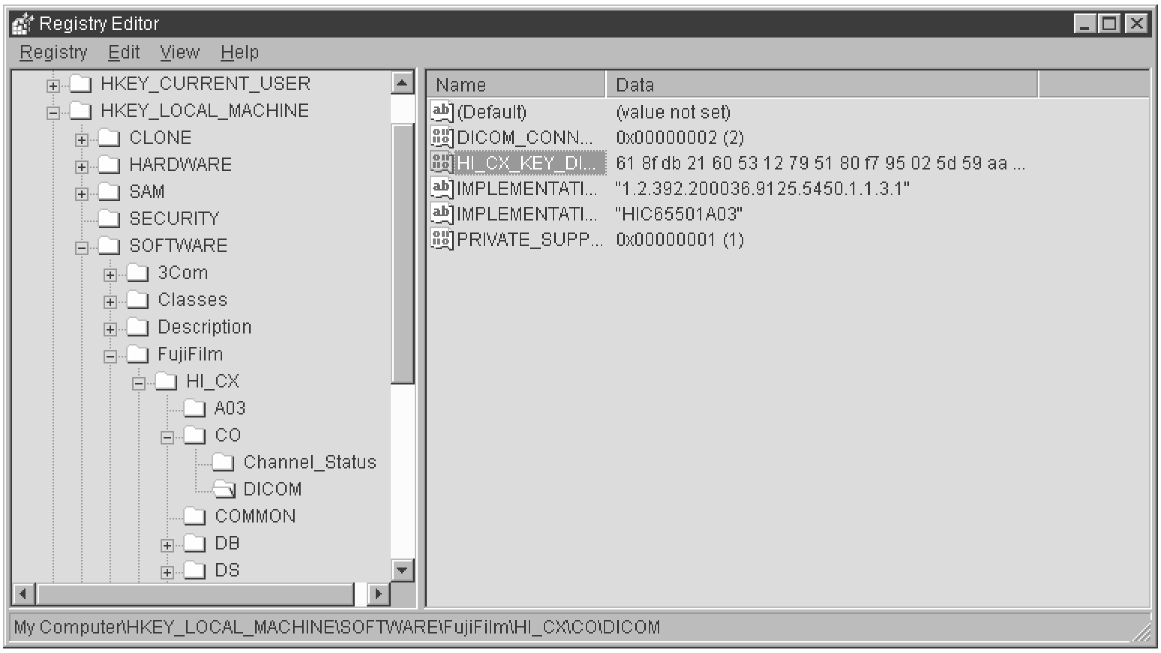
(2) Double-click "Regedit.exe" in the "Winnt" folder to start it.


C:WINNT
File Edit View Help
explorer.exe
IsUninst.exe
network.wri
Notepad.exe
Regedit.exe
setup.old
setuplog.txt
ShellIconC...
uninst.exe
vmmreg32....
welcome.e...
Win.ini
1 object(s) selected
70.2KB

(3) Select HI_CX_KEY_DICOM in the following directory.
HKEY_LOCAL_MACHINE/SOFTWARE/FujiFilm/HI_CX/CO/DICOM/HI_CX_KEY_DICOM

◆ *REFERENCE* ◆

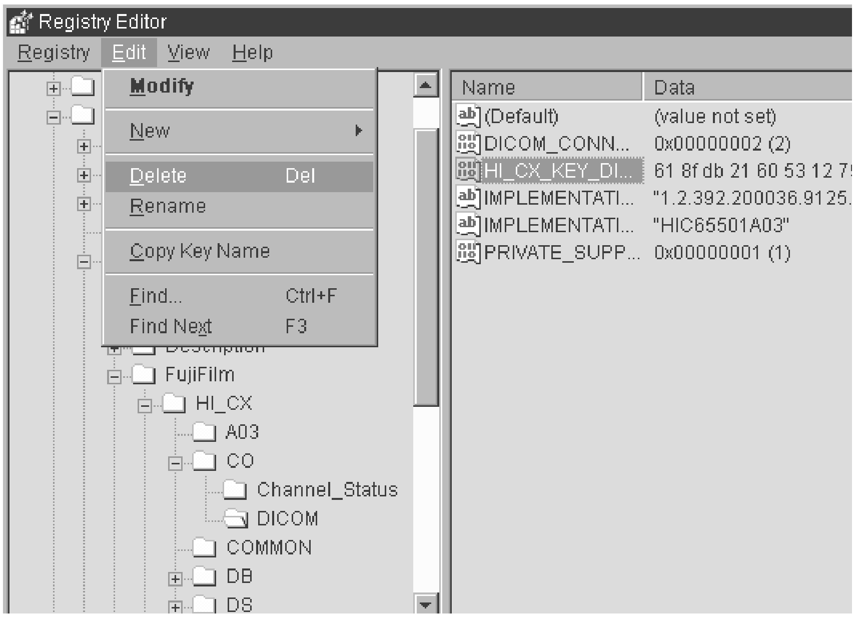
The contents of the registry appear in a window resembling that of Explorer.


Registry Editor
Registry
Edit
View
Help
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
CLONE
HARDWARE
SAM
SECURITY
SOFTWARE
3Com
Classes
Description
FujiFilm
HI_CX
A03
CO
Channel_Status
DICOM
COMMON
DB
DS

Name	Data
(Default)	(value not set)
DICOM_CONN...	0x00000002 (2)
HI_CX_KEY_DI...	61 8f db 21 60 53 12 79 51 80 f7 95 02 5d 59 aa ...
IMPLEMENTATI...	"1.2.392.200036.9125.5450.1.1.3.1"
IMPLEMENTATI...	"HIC65501A03"
PRIVATE_SUPP...	0x00000001 (1)

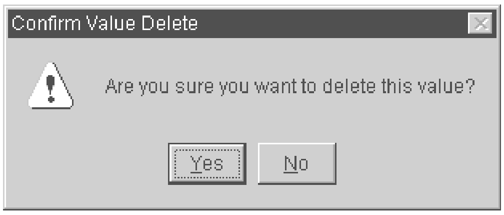
My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\FujiFilm\HI_CX\CO\DICOM

(4) On the "Edit" menu, click "Delete".


Registry Editor
Registry
Edit
View
Help
Modify
New
Delete Del
Rename
Copy Key Name
Find... Ctrl+F
Find Next F3
FujiFilm
HI_CX
A03
CO
Channel_Status
DICOM
COMMON
DB
DS

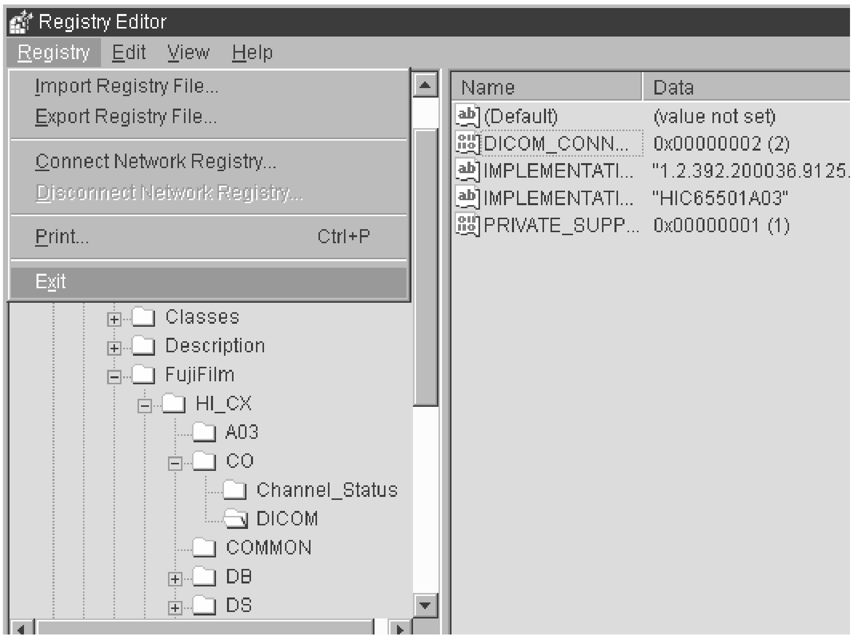
Name	Data
(Default)	(value not set)
DICOM_CONN...	0x00000002 (2)
HI_CX_KEY_DI...	61 8f db 21 60 53 12 7
IMPLEMENTATI...	"1.2.392.200036.9125.
IMPLEMENTATI...	"HIC65501A03"
PRIVATE_SUPP...	0x00000001 (1)

(5) When the following message appears, click [Yes].


Confirm Value Delete
Yes
No

Are you sure you want to delete this value?

(6) On the "Registry" menu, click "Exit" to quit the registry editor.



Registry Editor
Registry
Edit
View
Help
Import Registry File...
Export Registry File...
Connect Network Registry...
Disconnect Network Registry...
Print... Ctrl+P
Exit
Classes
Description
FujiFilm
HI_CX
A03
CO
Channel_Status
DICOM
COMMON
DB
DS

Name	Data
(Default)	(value not set)
DICOM_CONN...	0x00000002 (2)
IMPLEMENTATI...	"1.2.392.200036.9125.
IMPLEMENTATI...	"HIC65501A03"
PRIVATE_SUPP...	0x00000001 (1)

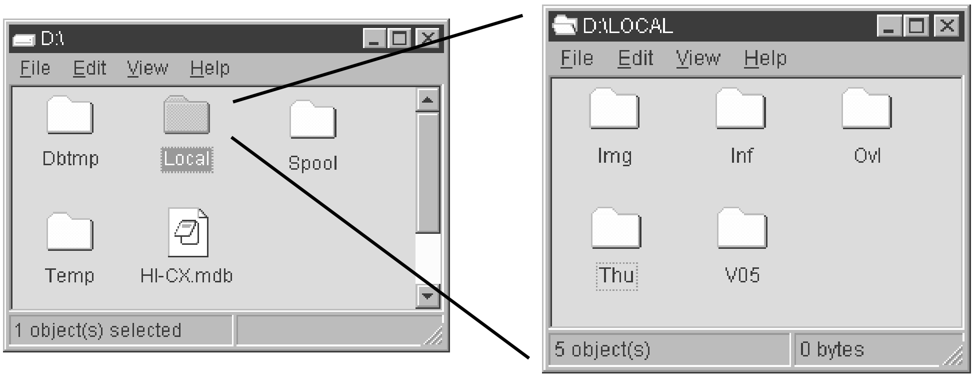
21. Backing Up Image Data

Current image data may be lost in the process of replacing the HDD or installing Windows NT (when the image area partition is deleted). Image data should therefore be backed up.

◆ *NOTE* ◆

Have media, which can store all the images in the HDD, ready to use.

(1) Copy the "Local" folder in the image area (D:).


D:\
File Edit View Help
Dbtmp
Local
Spool
Temp
HI-CX.mdb
1 object(s) selected
D:\LOCAL
File Edit View Help
Img
Inf
Ovl
Thu
V05
5 object(s)
0 bytes

Restore image data by reversing the necessary procedure.

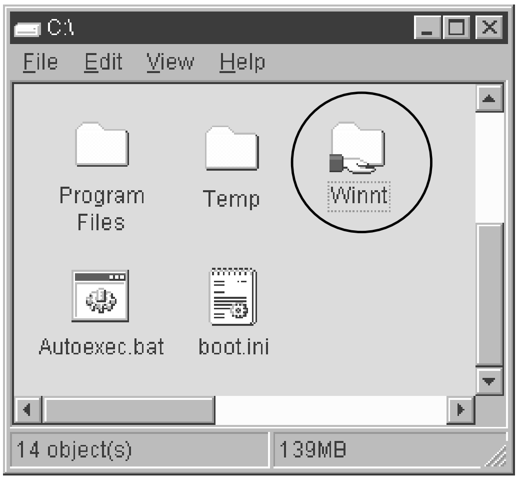
Next ▸▸

For a new installation from Windows NT ➔ *"22. Backing Up the FUJIFILM Registry"*

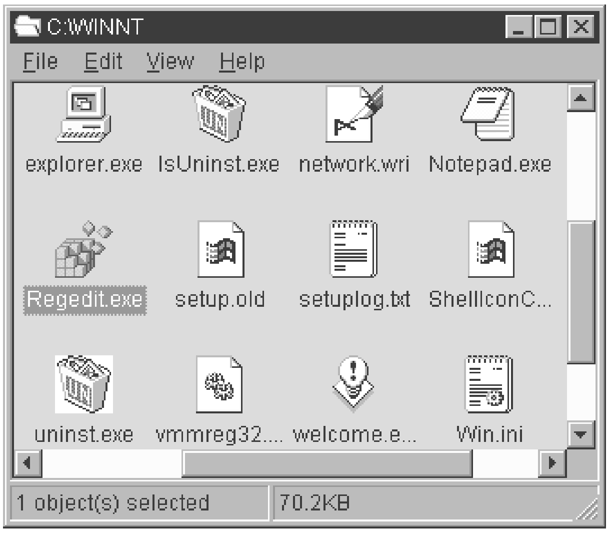
22. Backing Up FUJIFILM Registry

Save the registry contents. Use this for the registry editor.

(1) Double-click the "Winnt" folder in the "C:" drive.


C:\
File Edit View Help
Program Files
Temp
Winnt
Autoexec.bat
boot.ini
14 object(s)
139MB

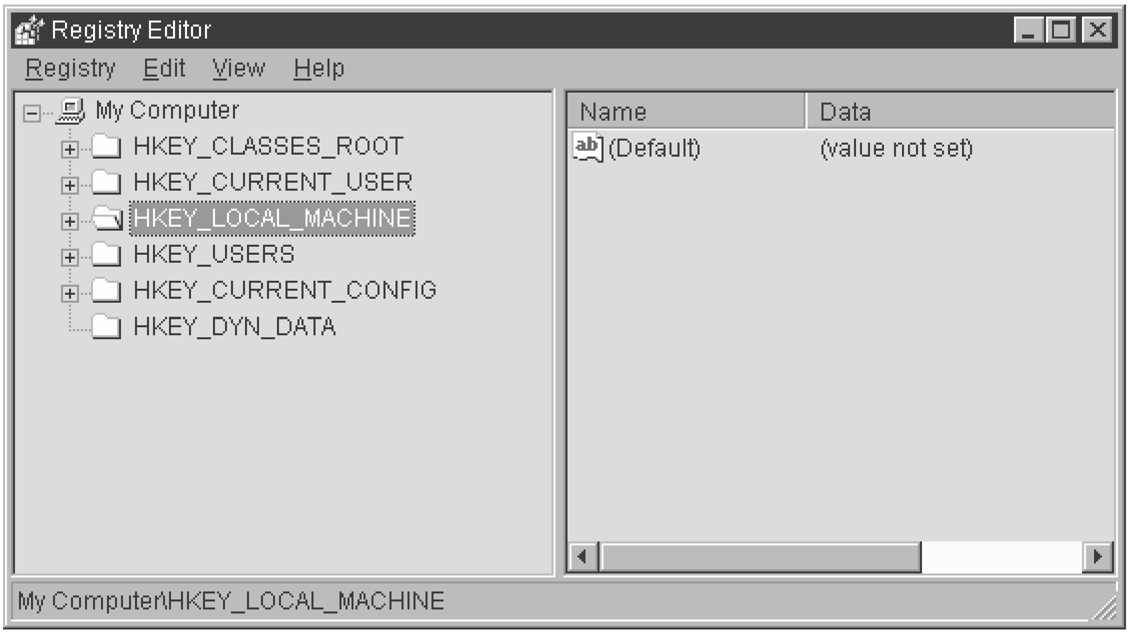
(2) Double-click to start the registry editor in the "Winnt" folder.


C:WINNT
File Edit View Help
explorer.exe
IsUninst.exe
network.wri
Notepad.exe
Regedit.exe
setup.old
setuplog.txt
ShellIconC...
uninst.exe
vmmreg32....
welcome.e...
Win.ini
1 object(s) selected
70.2KB

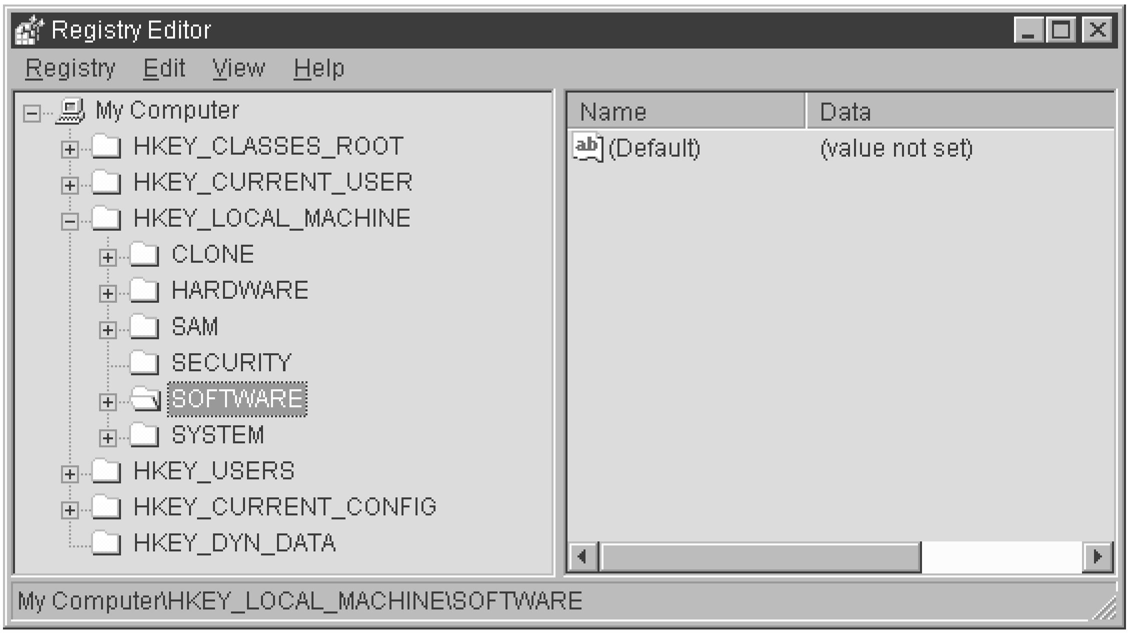
(3) Double-click "HKEY_LOCAL_MACHINE".

◆ REFERENCE ◆

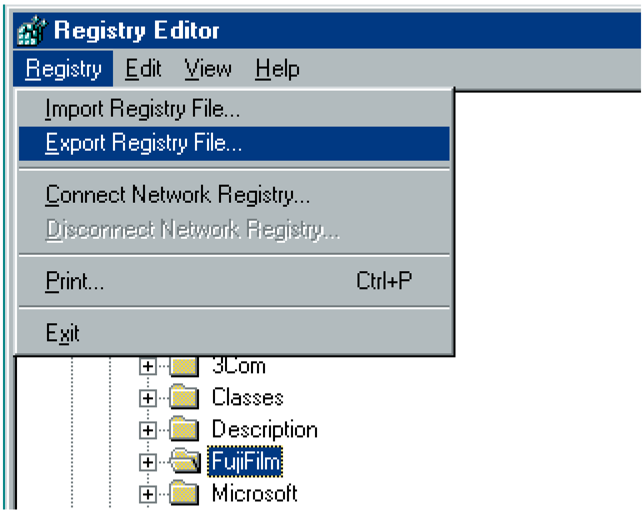
The contents of the registry appear in a window resembling that of Explorer.


Registry Editor
Registry
Edit
View
Help
My Computer
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HKEY_USERS
HKEY_CURRENT_CONFIG
HKEY_DYN_DATA
Name
Data
(Default)
(value not set)
My Computer\HKEY_LOCAL_MACHINE

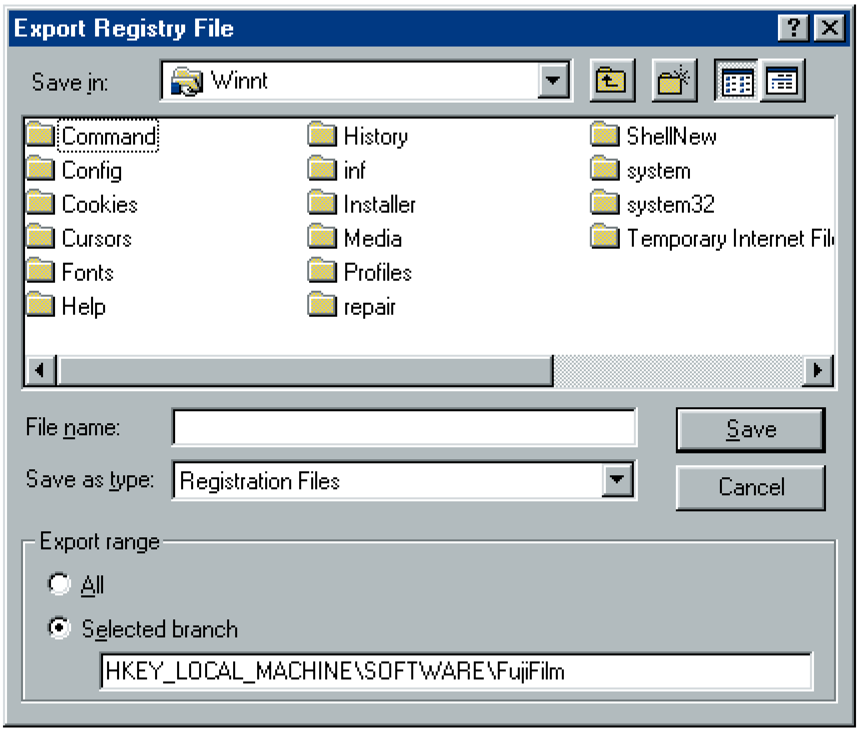
(4) Double-click "SOFTWARE", and click the "Fujifilm" registry inside.


Registry Editor
Registry
Edit
View
Help
My Computer
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
CLONE
HARDWARE
SAM
SECURITY
SOFTWARE
SYSTEM
HKEY_USERS
HKEY_CURRENT_CONFIG
HKEY_DYN_DATA
Name
Data
(Default)
(value not set)
My Computer\HKEY_LOCAL_MACHINE\SOFTWARE

(5) Select [Export Registry File] from the “Registry” menu.


Registry Editor
Registry
Edit
View
Help
Import Registry File...
Export Registry File...
Connect Network Registry...
Disconnect Network Registry...
Print... Ctrl+P
Exit
3Com
Classes
Description
FujiFilm
Microsoft

(6) Select a location you wish to save the file and enter the filename (e.g.: Registry). Click then [Save].


Export Registry File
Command
Config
Cookies
Cursors
Fonts
Help
History
inf
Installer
Media
Profiles
repair
ShellNew
system
system32
Temporary Internet Fil
Save
Cancel

Save in: Winnt

File name:

Save as type: Registration Files

Export range

○ All

● Selected branch

HKEY_LOCAL_MACHINE\SOFTWARE\FujiFilm

Restore image data by reversing the necessary procedure.

Next ▸▸
For a new Windows NT installation ➔ *“7. Installing Windows NT”*

23. Adding the DICOM Print Service to the QA-WS System

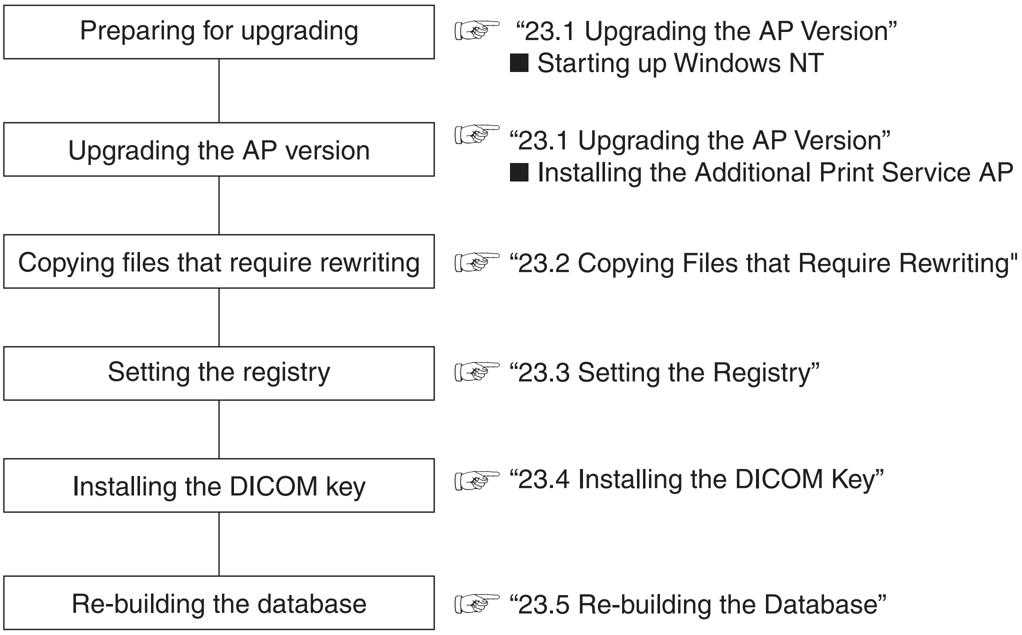
Follow the procedure described below to add the DICOM Print Service to the QA-WS system.

Terms used hereafter are simplified as follows.
- Windows NT .... NT
- QA-WS application software .... AP

● Have the following ready for use for software version upgrade

- CD-ROM for additional DICOM Print Service AP (version A01) installation

● Software version upgrading work flow



Preparing for upgrading	☞ “23.1 Upgrading the AP Version” ■ Starting up Windows NT
Upgrading the AP version	☞ “23.1 Upgrading the AP Version” ■ Installing the Additional Print Service AP
Copying files that require rewriting	☞ “23.2 Copying Files that Require Rewriting"
Setting the registry	☞ “23.3 Setting the Registry”
Installing the DICOM key	☞ “23.4 Installing the DICOM Key”
Re-building the database	☞ “23.5 Re-building the Database”

FR1B1047.EPS

23.1 Upgrading the AP Version

■ Starting up Windows NT

(1) Turn the 21" CRT and equipment power ON.
Windows NT will start up.

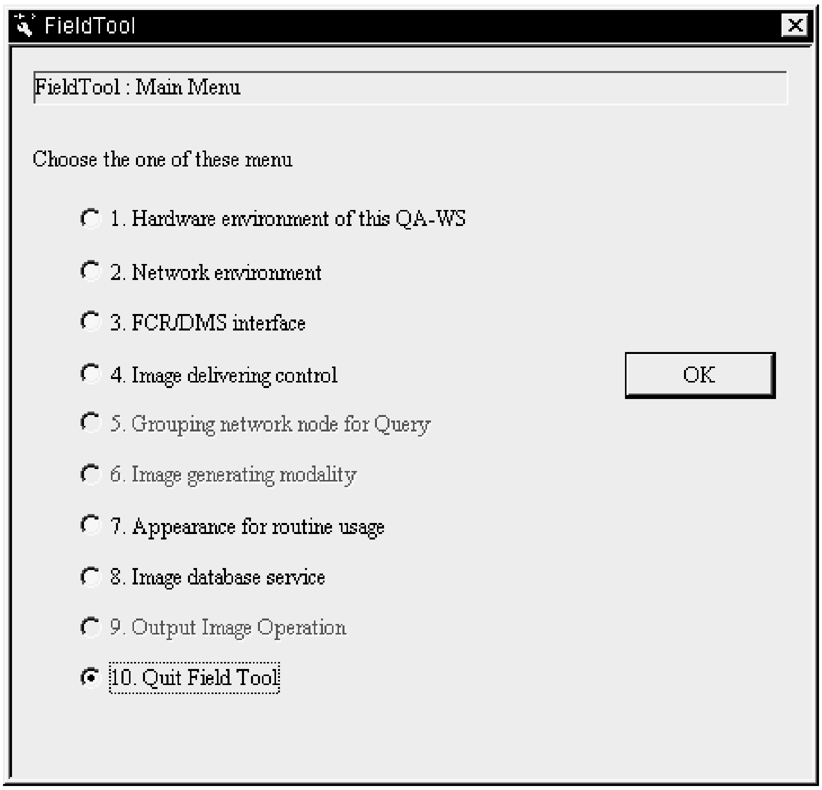
◆ *NOTE* ◆

- *When the equipment has been started up, the AP will also start up automatically after a while. Log in the Field Tool so that the AP does not start up.*
- *If fails in logging in the Field Tool, quit the AP and the re-turn the equipment power ON.*

(2) When the start bar appears on the bottom of the screen, hold down the <Shift> key.
The Filed Tool will start.

(3) Check to see that the Field Tool has been started up and then release the <Shift> key.

The FieldTool: Main Menu will appear.



FieldTool

FieldTool : Main Menu

Choose the one of these menu

○ 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
○ 8. Image database service
○ 9. Output Image Operation
● 10. Quit Field Tool

FR1H1001.EPS

(4) Select “10. Quit Field Tool” on the FieldTool: Main Menu and click [OK].

The Field Tool will quit.

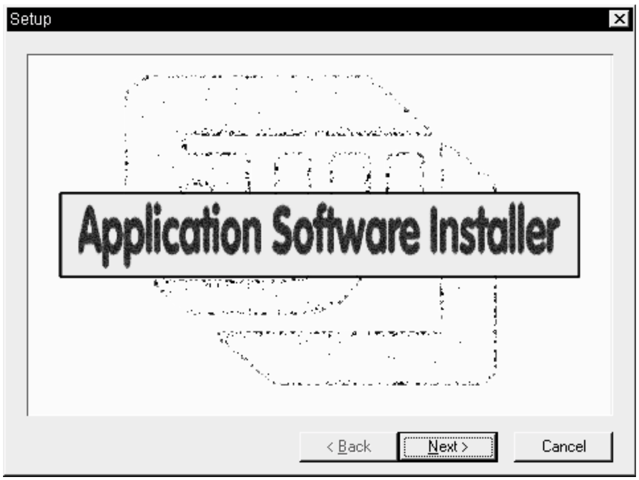
◆ REMARKS ◆

Be sure to close all windows opened on the desktop.

■ Installing the additional DICOM Print Service AP

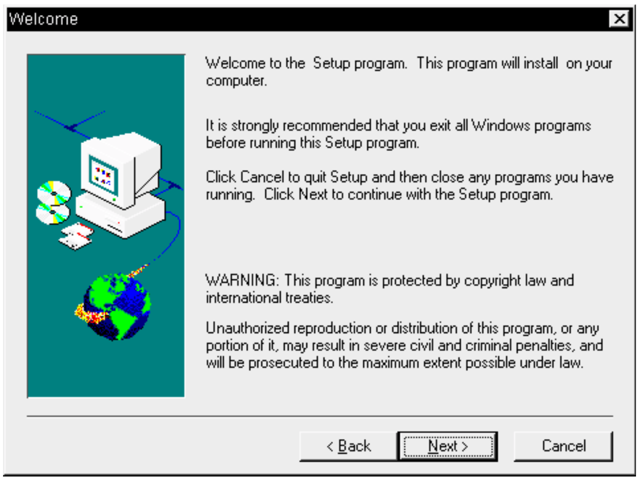
(1) Insert the additional DICOM Print Service AP (A01 version) CD-ROM into the CD-ROM drive. If the CD-ROM has already been inserted, remove from the drive and re-insert it.
The installation program will start up automatically.

(2) Click [Next].



FR1H1023.EPS

(3) Click [Next].



Welcome to the Setup program. This program will install on your computer.

It is strongly recommended that you exit all Windows programs before running this Setup program.

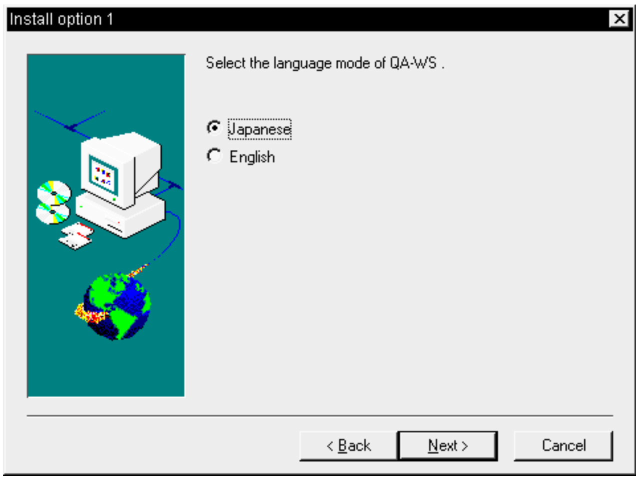
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

FR1H1002.EPS

(4) Select language (Japanese or English) and click [Next].



Select the language mode of QA-WS .

● Japanese
○ English

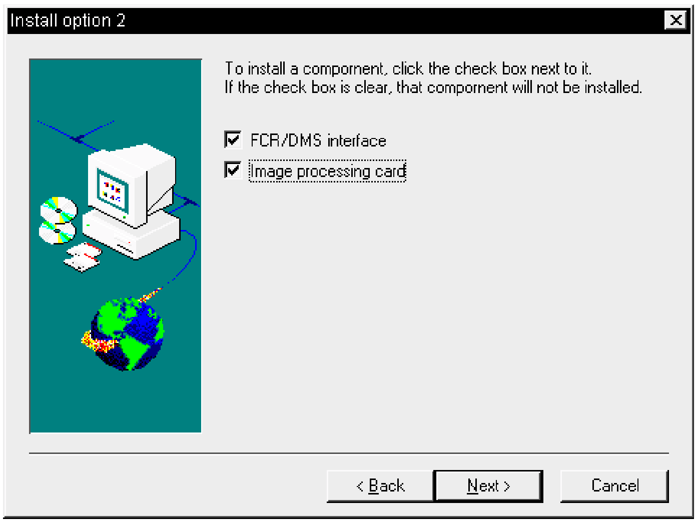
FR1H1003.EPS

(5) Check items as necessary, in accordance with the board to be used and then click [Next].

- ☐ FCR/DMS interface : If using an E-i/f
- ☐ Image processing card : If using an image processing board

◆ NOTE ◆

If the image processing board has actually been installed in the QA-WS system, make sure to check the "Image processing card" on the screen.



Install option 2

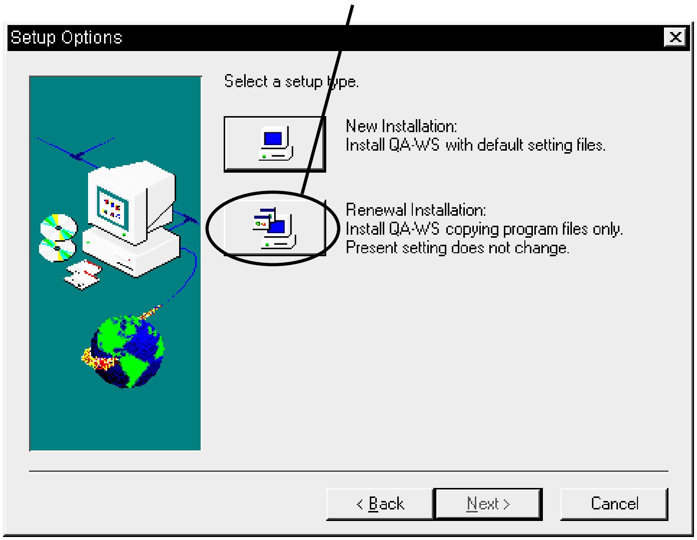
To install a component, click the check box next to it.
If the check box is clear, that component will not be installed.

☑ FCR/DMS interface
☑ Image processing card

FR1H1004.EPS

(6) For the installation type, select "Renewal Installation" and then click [Next].

Select "Renewal Installation"



Setup Options

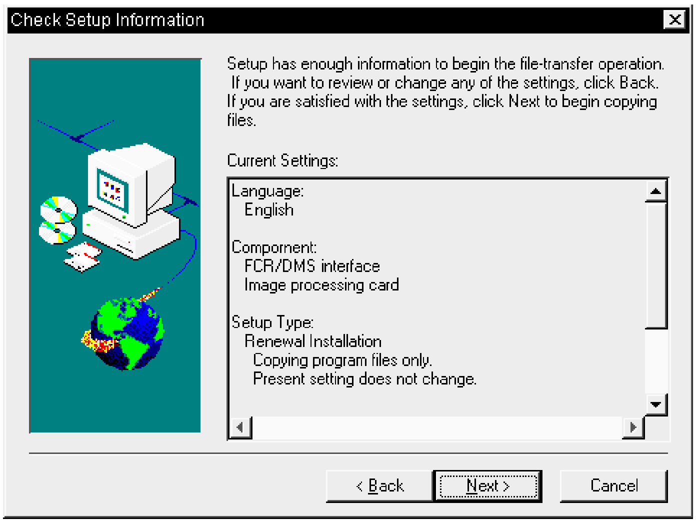
Select a setup type.

New Installation:
Install QA-WS with default setting files.

Renewal Installation:
Install QA-WS copying program files only.
Present setting does not change.

FR1H1005.EPS

(7) Make sure that “Current Settings:” have been set up correctly and then click [Next].



Check Setup Information

Setup has enough information to begin the file-transfer operation. If you want to review or change any of the settings, click Back. If you are satisfied with the settings, click Next to begin copying files.

Current Settings:

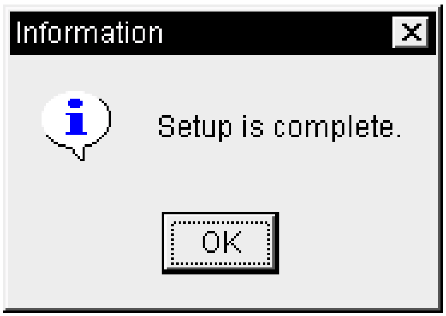
Language:
  English

Component:
  FCR/DMS interface
  Image processing card

Setup Type:
  Renewal Installation
    Copying program files only.
    Present setting does not change.

FR1H1006.EPS

(8) Click [OK].

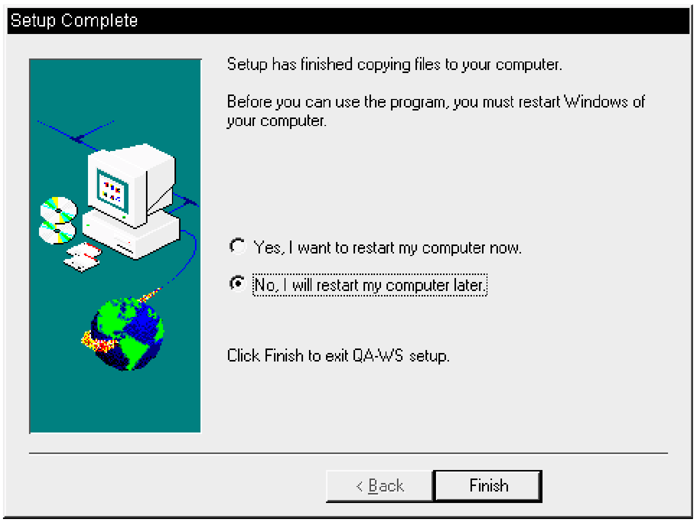


Information

Setup is complete.

FR1H1007.EPS

(9) Select “No, I will restart my computer later.” and then click [Finish].



Setup Complete

Setup has finished copying files to your computer.

Before you can use the program, you must restart Windows of your computer.

○ Yes, I want to restart my computer now.

● No, I will restart my computer later.

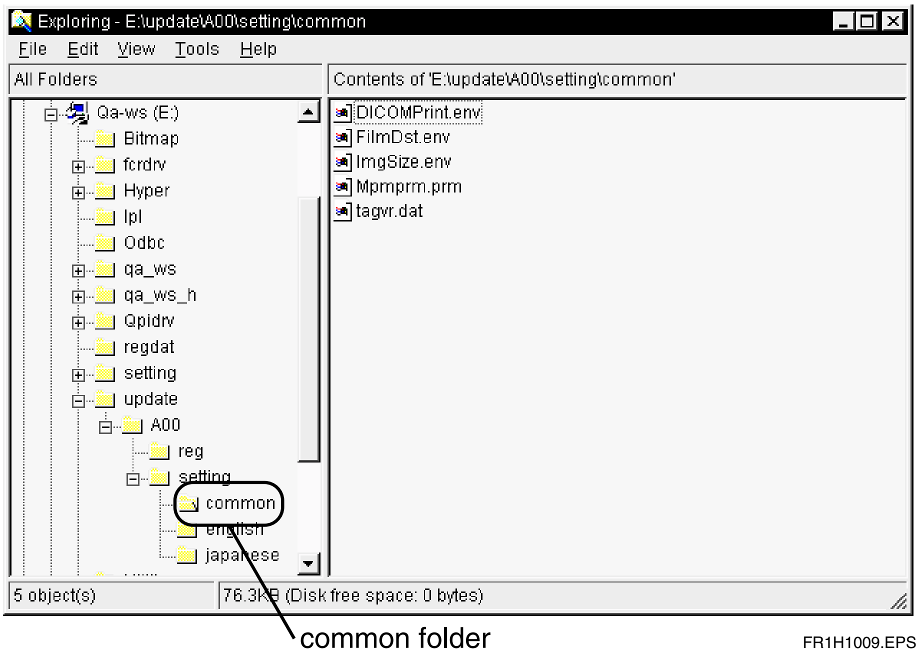
Click Finish to exit QA-WS setup.

FR1H1008.EPS

23.2 Copying Files That Require Rewriting

Copy files required to be updated or added due to AP version upgrading onto the hard disk.

(1) Open the following folder.
“CD-ROM drive\update\A00\setting\common”


Exploring - E:\update\A00\setting\common
File Edit View Tools Help
All Folders
Contents of 'E:\update\A00\setting\common'
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Ipl
Odbc
qa_ws
qa_ws_h
Qpidrv
regdat
setting
update
A00
reg
setting
common
english
japanese
DICOMPrint.env
FilmDst.env
ImgSize.env
Mpmprm.prm
tagvr.dat
5 object(s)
76.3KB (Disk free space: 0 bytes)

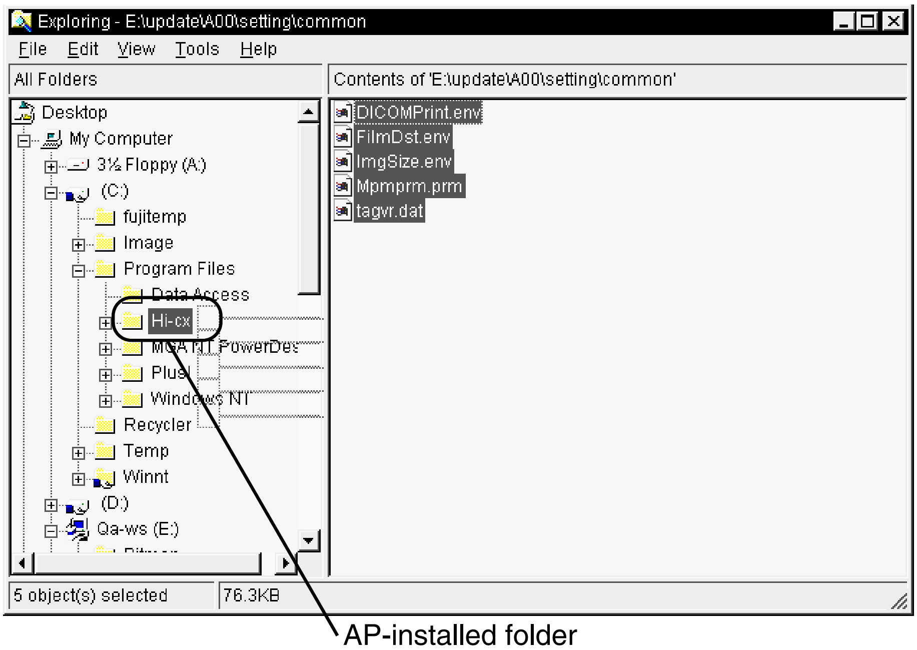
common folder

FR1H1009.EPS

(2) Copy all the files in the common folder onto the folder (basically “C:\Program Files\Hi-cx”) on which the AP has been installed.

◆ ***REMARKS*** ◆

If the dialog asking whether to update the file or not is displayed during copying in step (2) above, select “Update.”


Exploring - E:\update\A00\setting\common
File Edit View Tools Help
All Folders
Contents of 'E:\update\A00\setting\common'
Desktop
My Computer
3½ Floppy (A:)
(C:)
fujitemp
Image
Program Files
Data Access
Hi-cx
MGA NT PowerDe
Plus!
Windows NT
Recycler
Temp
Winnt
(D:)
Qa-ws (E:)
DICOMPrint.env
FilmDst.env
ImgSize.env
Mpmprm.prm
tagvr.dat
5 object(s) selected
76.3KB

AP-installed folder

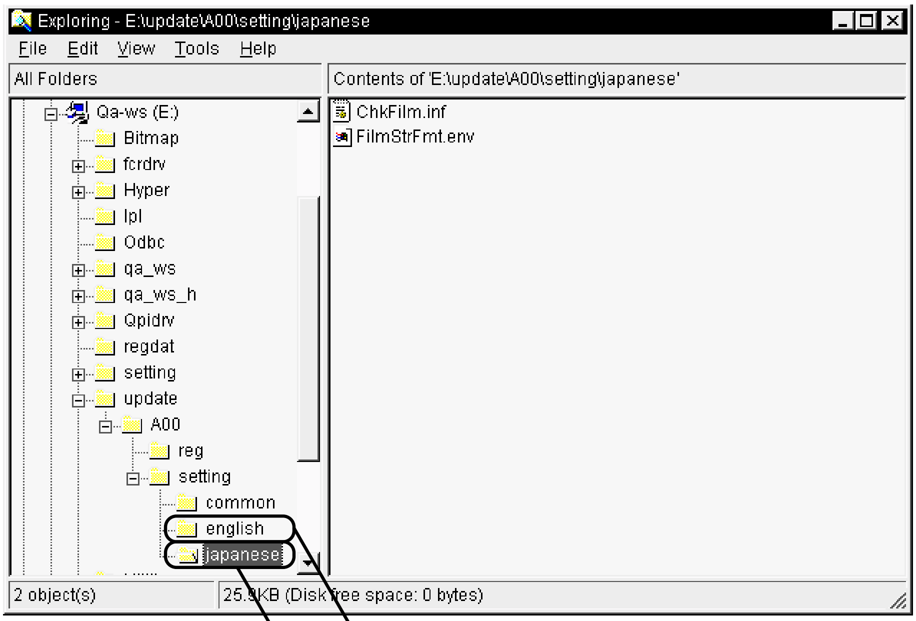
FR1H1010.EPS

(3) Open the following folder.

“CD-ROM drive\update\A00\setting\japanese or english”

◆ *NOTE* ◆

For selection of “japanese” or “english,” select the same language folder as that selected during AP installation.


Exploring - E:\update\A00\setting\japanese
File Edit View Tools Help
All Folders
Contents of 'E:\update\A00\setting\japanese'
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Ipl
Odbc
qa_ws
qa_ws_h
Qpidrv
regdat
setting
update
A00
reg
setting
common
english
japanese
ChkFilm.inf
FilmStrFmt.env
2 object(s)
25.9KB (Disk free space: 0 bytes)

english folder

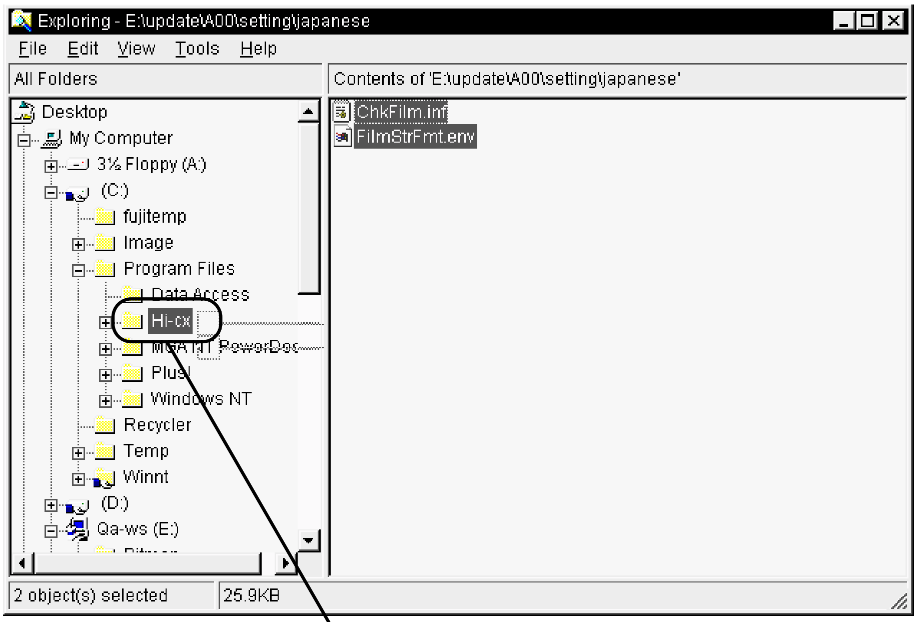
japanese folder

FR1H1011.EPS

(4) Copy all the files in the “japanese” or “english” folder onto the folder (basically “C:\Program Files\Hi-cx”) on which the AP has been installed.

◆ *REMARKS* ◆

If the dialog asking whether to update the file or not is displayed during copying in step (4) above, select “Update.”

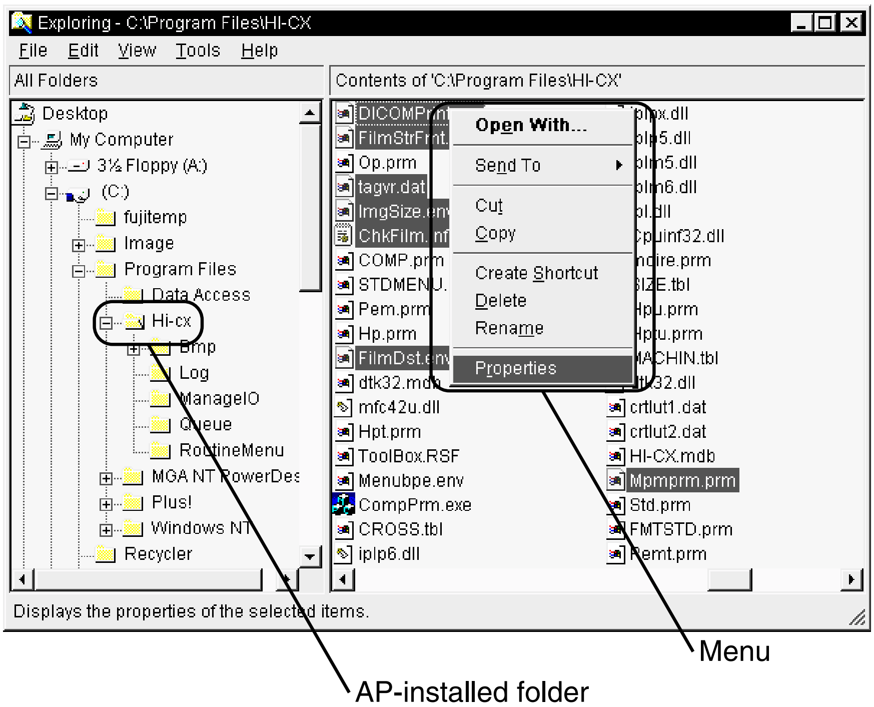

Exploring - E:\update\A00\setting\japanese
File Edit View Tools Help
All Folders
Contents of 'E:\update\A00\setting\japanese'
Desktop
My Computer
3½ Floppy (A:)
(C:)
fujitemp
Image
Program Files
Data Access
Hi-cx
MGA NT PowerDoc
Plus!
Windows NT
Recycler
Temp
Winnt
(D:)
Qa-ws (E:)
ChkFilm.inf
FilmStrFmt.env
2 object(s) selected
25.9KB

AP-installed folder

FR1H1012.EPS

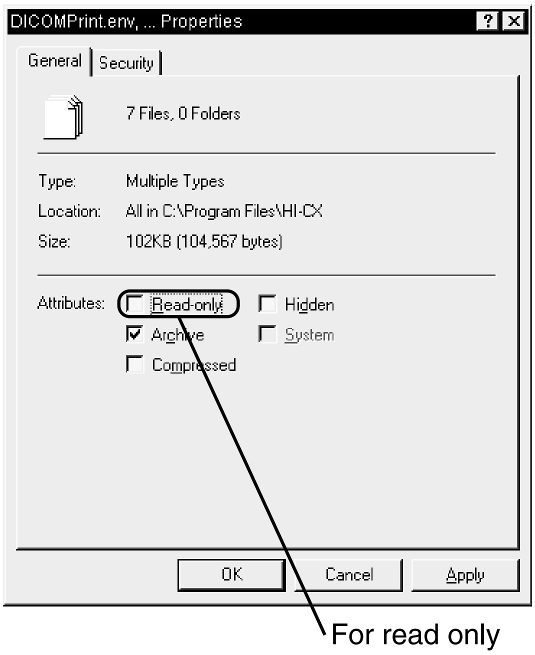
(5) Select all files copied in steps (2) and (4) above from the folder (basically “C:\Program Files\Hi-cx”).

(6) Right-click the mouse and select [Properties] from the menu.


Exploring - C:\Program Files\HI-CX
File Edit View Tools Help
All Folders
Contents of 'C:\Program Files\HI-CX'
Desktop
My Computer
3½ Floppy (A:)
(C:)
fujitemp
Image
Program Files
Data Access
Hi-cx
Bmp
Log
ManageIO
Queue
RoutineMenu
MGA NT PowerDes
Plus!
Windows NT
Recycler
DICOMPrint
FilmStrFrnt.
Op.prm
tagvr.dat
ImgSize.env
ChkFilm.inf
COMP.prm
STDMENU.
Pem.prm
Hp.prm
FilmDst.env
dtk32.mdb
mfc42u.dll
Hpt.prm
ToolBox.RSF
Menubpe.env
CompPrm.exe
CROSS.tbl
iplp6.dll
Open With...
Send To
Cut
Copy
Create Shortcut
Delete
Rename
Properties
iplpx.dll
iplp5.dll
iplm5.dll
iplm6.dll
ipl.dll
Cpuinf32.dll
Indire.prm
SIZE.tbl
Hpu.prm
Hptu.prm
MACHIN.tbl
dtk32.dll
crtlut1.dat
crtlut2.dat
HI-CX.mdb
Mpmprm.prm
Std.prm
FMTSTD.prm
Pemt.prm
Displays the properties of the selected items.
Menu
AP-installed folder

FR1H1013.EPS

(7) Deselect [Read only] in the [Properties] dialog box and click [OK].


DICOMPrint.env, ... Properties
General
Security
OK
Cancel
Apply
For read only

7 Files, 0 Folders

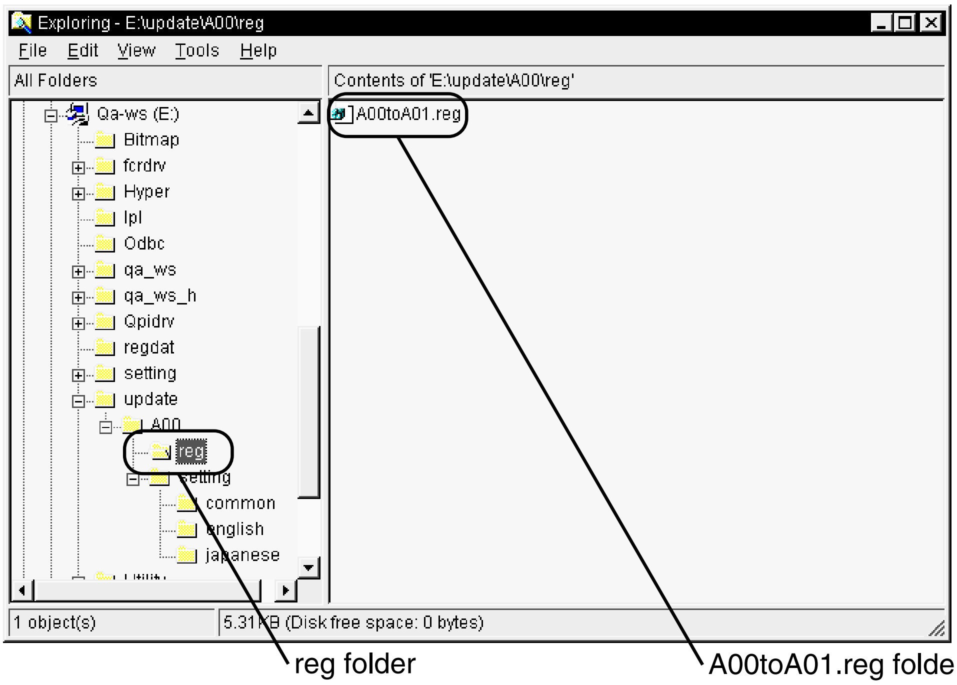
Type: Multiple Types
Location: All in C:\Program Files\HI-CX
Size: 102KB (104,567 bytes)

Attributes: ☐ Read-only ☐ Hidden
☑ Archive ☐ System
☐ Compressed

FR1H1014.EPS

23.3 Setting the Registry

(1) Open the following folder.
“CD-ROM drive\update\A00\reg”


Exploring - E:\update\A00\reg
File Edit View Tools Help
All Folders
Contents of 'E:\update\A00\reg'
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Ipl
Odbc
qa_ws
qa_ws_h
Qpidrv
regdat
setting
update
A00
reg
setting
common
english
japanese
A00toA01.reg
1 object(s)
5.31KB (Disk free space: 0 bytes)

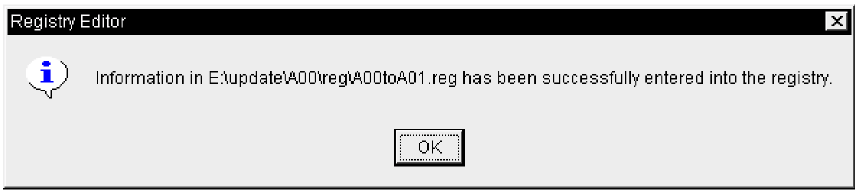
reg folder

A00toA01.reg folder

FR1H1015.EPS

(2) Double-click the “A00toA01.reg” file in the “reg” folder.
The dialog box like that shown below will appear.

(3) Click [OK].


Registry Editor
OK

Information in E:\update\A00\reg\A00toA01.reg has been successfully entered into the registry.

FR1H1016.EPS

23.4 Installing the DICOM Key

Install the optional DICOM Key as necessary.

☞ “15. Installing the DICOM Option Key”

◆ *NOTE* ◆

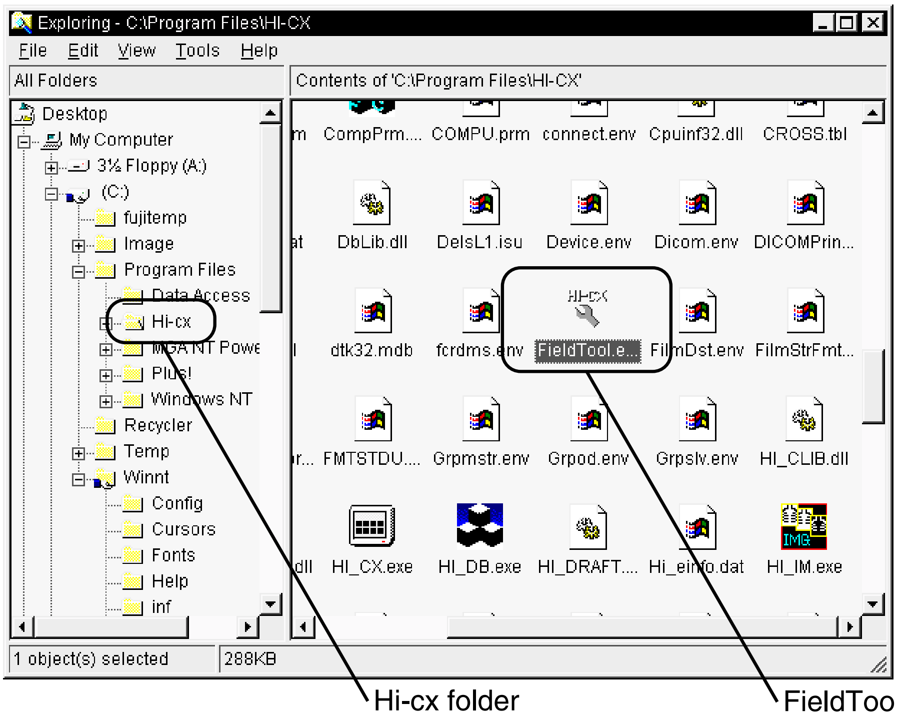
Installing the DICOM will reset the AP key. For this reason, the AP key must be re-installed.

23.5 Re-building the Database

If the AP version has been upgraded, it is necessary to re-build the database with the FieldTool file, following the procedure described below.

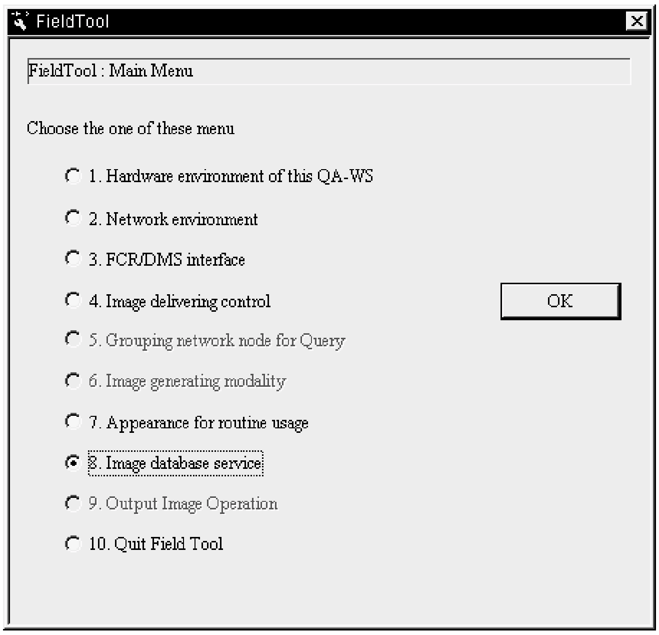
(1) Open the following folder.
"C:\Program Files\Hi-cx"

(2) Double-click the FieldTool.exe file.


Exploring - C:\Program Files\HI-CX
File Edit View Tools Help
All Folders
Contents of 'C:\Program Files\HI-CX'
Desktop
My Computer
3½ Floppy (A:)
(C:)
fujitemp
Image
Program Files
Data Access
Hi-cx
MGA NT Powe
Plus!
Windows NT
Recycler
Temp
Winnt
Config
Cursors
Fonts
Help
inf
CompPrm....
COMPU.prm
connect.env
Cpuinf32.dll
CROSS.tbl
DbLib.dll
DelsL1.isu
Device.env
Dicom.env
DICOMPrin...
dtk32.mdb
fcrdms.env
FieldTool.e...
FilmDst.env
FilmStrFmt...
FMTSTDU....
Grpmstr.env
Grpod.env
Grpslv.env
HI_CLIB.dll
HI_CX.exe
HI_DB.exe
HI_DRAFT....
Hi_einfo.dat
HI_IM.exe
1 object(s) selected
288KB
Hi-cx folder
FieldTool.exe file

FR1H1017.EPS

(3) Select "8. Image database service" and click [OK].


FieldTool

FieldTool : Main Menu

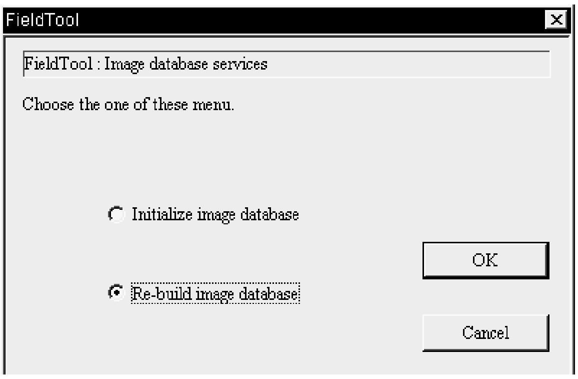
Choose the one of these menu

○ 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
● 8. Image database service
○ 9. Output Image Operation
○ 10. Quit Field Tool

FR1H1018.EPS

(4) Select “Re-build image database” and click [OK].

The dialog indicating that the database is ready to be re-built will appear.


FieldTool
FieldTool : Image database services

Choose the one of these menu.

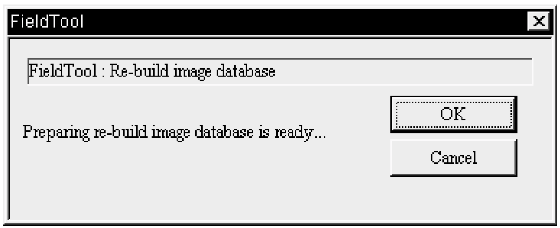
○ Initialize image database
● Re-build image database
OK
Cancel

FR1H1019.EPS

(5) Click [OK].

The database will be re-built.

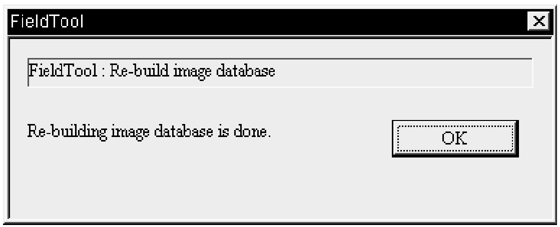
The dialog box indicating that the database has been re-built will appear.


FieldTool
FieldTool : Re-build image database
OK
Cancel

Preparing re-build image database is ready...

FR1H1022.EPS

(6) Click [OK].


FieldTool
FieldTool : Re-build image database
OK

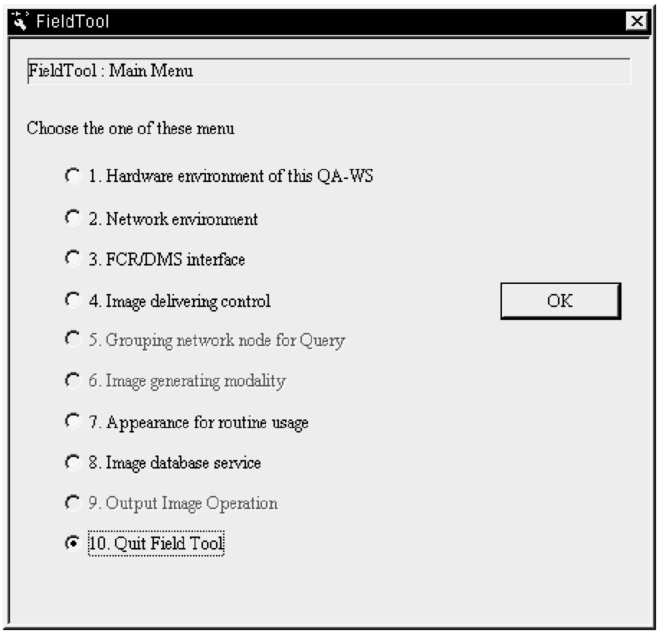
Re-building image database is done.

FR1H1020.EPS

(7) Click [Cancel] repeatedly until the FieldTool menu re-appears.

(8) Select “10.Quit Field Tool” and click [OK].

The FiledTool will quit.



FieldTool
FieldTool : Main Menu
Choose the one of these menu
○ 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
○ 8. Image database service
○ 9. Output Image Operation
● 10. Quit Field Tool
OK

FR1H1021.EPS

Next ▶▶

➔ *“14. Installing the AP Key”*

Appendix 1. CompPRM.exe

Using CompPrm. Exe, the contents of files (COMP.PRM and COMPU.PRM) used for managing the compression rate of images stored in the PC-HIC can be changed.

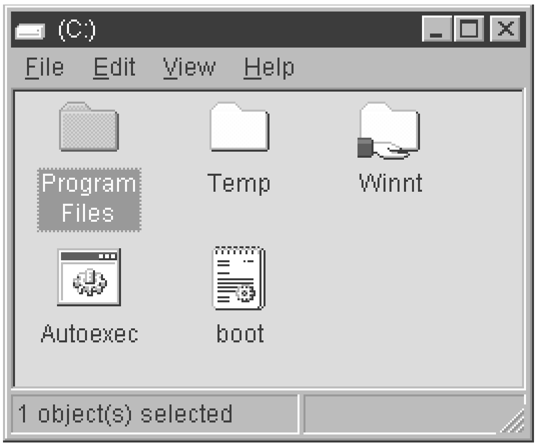
The COMP.PRM and COMPU.PRM files to be changed and the tool for changing CompPrm. Exe can be found in the C:\Program Files\HI-CX directory.

1.1 Starting the Application

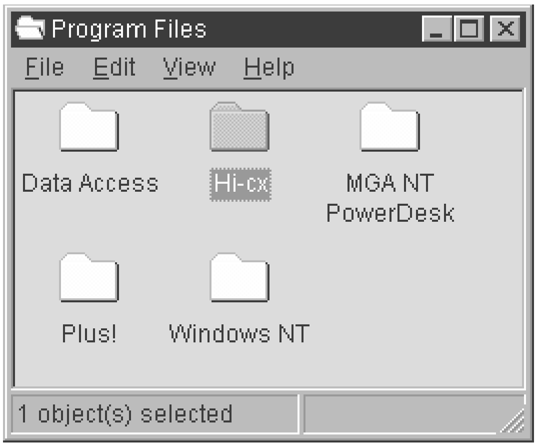
(1) Double-click "My Computer" on the Windows NT desktop.

(2) Double-click "C:".

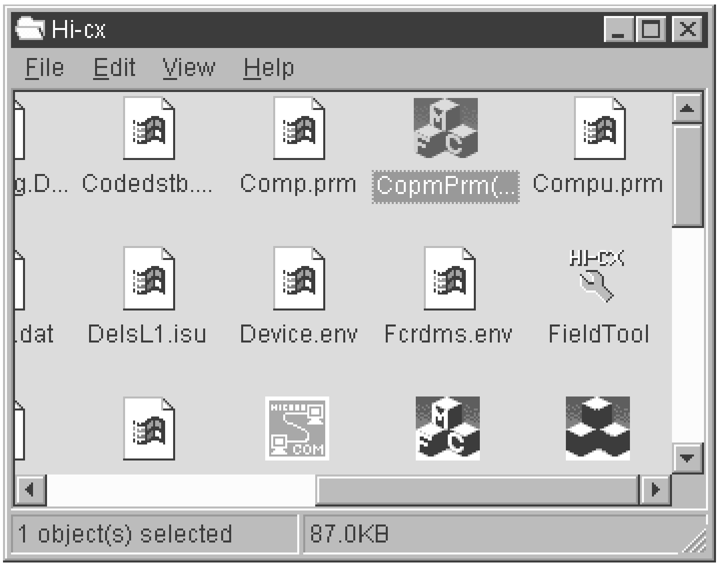
(3) Double-click "Program Files".


(C:)
File
Edit
View
Help
Program Files
Temp
Winnt
Autoexec
boot
1 object(s) selected

(4) Double-click "HI_cx"


Program Files
File
Edit
View
Help
Data Access
Hi-cx
MGA NT PowerDesk
Plus!
Windows NT
1 object(s) selected

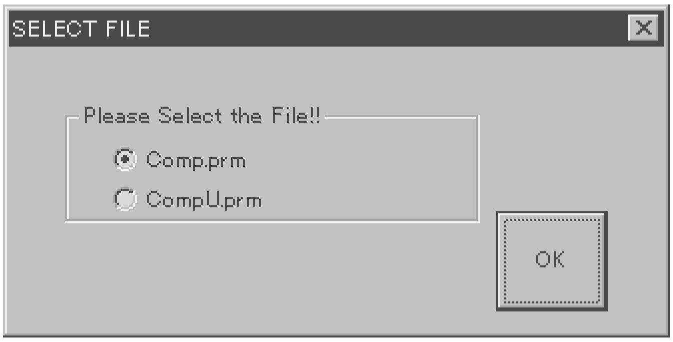
(5) Double-click "CompPrm(E)".


Hi-cx
File Edit View Help
g.D...
Codedstb....
Comp.prm
CopmPrm(...
Compu.prm
.dat
DelsL1.isu
Device.env
Fcrdms.env
FieldTool
1 object(s) selected
87.0KB

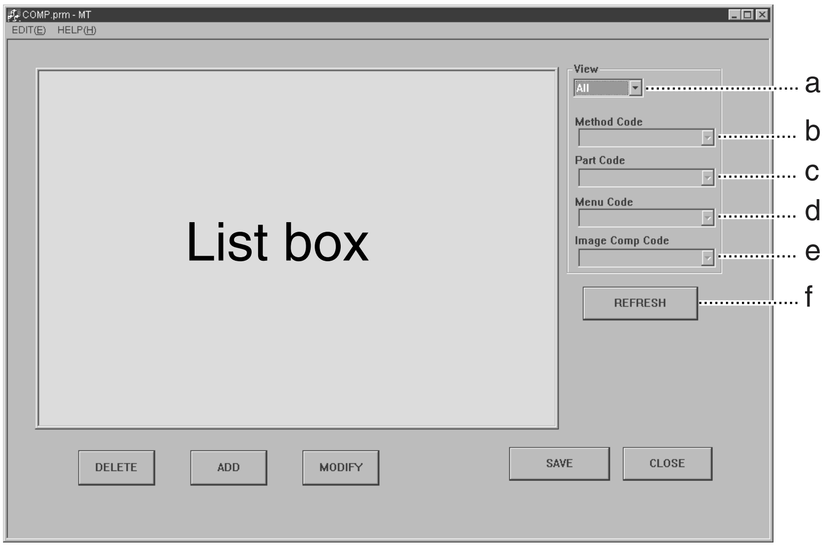
(6) When the "SELECT FILE" dialog box appears, select the file to be changed. Click [OK].

◆ **NOTE** ◆

The following describes the procedure for selecting COMP.PRM as an example.


SELECT FILE
Please Select the File!!
● Comp.prm
○ CompU.prm
OK

(7) The "COMP prm-MT" screen appears.


COMP.prm - MT
EDIT(E) HELP(H)
List box
View
All
Method Code
Part Code
Menu Code
Image Comp Code
REFRESH
DELETE
ADD
MODIFY
SAVE
CLOSE
a
b
c
d
e
f

a. View
b. Method code
c. Part code
d. Menu code
e. Image Comp
f. REFRESH

1.2 Displaying

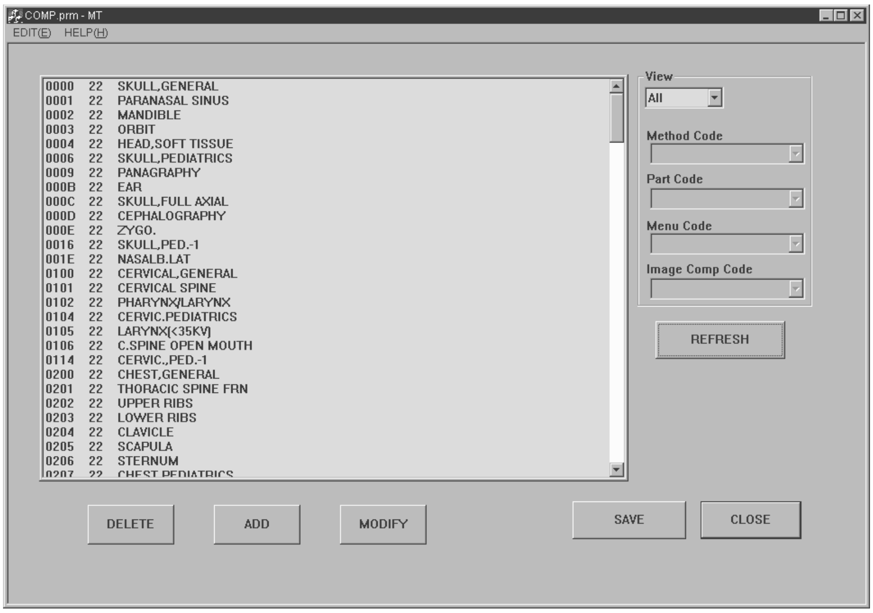
This section describes how to display the COMP. PRM file.

■ To display all the contents:

(1) Select "All" in the "View" box of the "COMP prm-MT" screen.

(2) Click the [REFRESH] button.

(3) The list box displays all the contents of the COMP. PRM file.



```
0000   22   SKULL,GENERAL
0001   22   PARANASAL SINUS
0002   22   MANDIBLE
0003   22   ORBIT
0004   22   HEAD,SOFT TISSUE
0006   22   SKULL,PEDIATRICS
0009   22   PANAGRAPHY
000B   22   EAR
000C   22   SKULL,FULL AXIAL
000D   22   CEPHALOGRAPHY
000E   22   ZYGO.
0016   22   SKULL,PED.-1
001E   22   NASALB.LAT
0100   22   CERVICAL,GENERAL
0101   22   CERVICAL SPINE
0102   22   PHARYNX/LARYNX
0104   22   CERVIC.PEDIATRICS
0105   22   LARYNX(<35KV)
0106   22   C.SPINE OPEN MOUTH
0114   22   CERVIC.,PED.-1
0200   22   CHEST,GENERAL
0201   22   THORACIC SPINE FRN
0202   22   UPPER RIBS
0203   22   LOWER RIBS
0204   22   CLAVICLE
0205   22   SCAPULA
0206   22   STERNUM
0207   22   CHEST PEDIATRICS
```

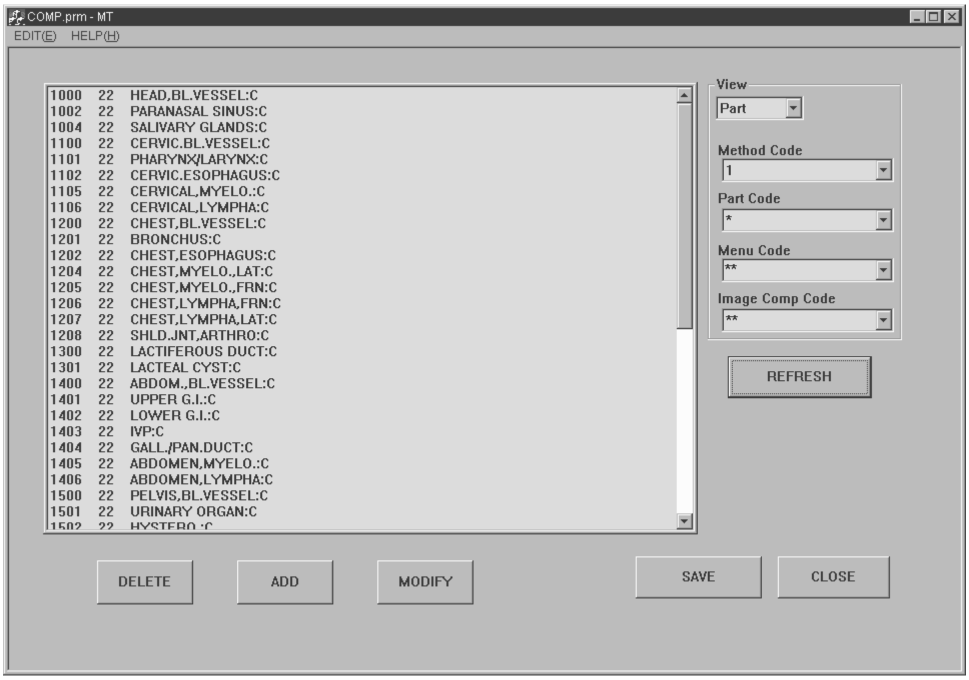
View: All
Method Code:
Part Code:
Menu Code:
Image Comp Code:

■ To specify the MPM code and display the item selected:

(1) Select "Part" in the "View" box of the "COMP prm-MT" screen.

(2) Select the desired MPM code and click the [REFRESH] button.

(3) The list box displays the contents selected from the COMP. PRM file.



```
1000   22   HEAD,BL.VESSEL:C
1002   22   PARANASAL SINUS:C
1004   22   SALIVARY GLANDS:C
1100   22   CERVIC.BL.VESSEL:C
1101   22   PHARYNX/LARYNX:C
1102   22   CERVIC.ESOPHAGUS:C
1105   22   CERVICAL,MYELO.:C
1106   22   CERVICAL,LYMPHA:C
1200   22   CHEST,BL.VESSEL:C
1201   22   BRONCHUS:C
1202   22   CHEST,ESOPHAGUS:C
1204   22   CHEST,MYELO.,LAT:C
1205   22   CHEST,MYELO.,FRN:C
1206   22   CHEST,LYMPHA,FRN:C
1207   22   CHEST,LYMPHA,LAT:C
1208   22   SHLD.JNT,ARTHRO:C
1300   22   LACTIFEROUS DUCT:C
1301   22   LACTEAL CYST:C
1400   22   ABDOM.,BL.VESSEL:C
1401   22   UPPER G.I.:C
1402   22   LOWER G.I.:C
1403   22   IVP:C
1404   22   GALL./PAN.DUCT:C
1405   22   ABDOMEN,MYELO.:C
1406   22   ABDOMEN,LYMPHA:C
1500   22   PELVIS,BL.VESSEL:C
1501   22   URINARY ORGAN:C
1502   22   HYSTERO.:C
```

View: Part
Method Code: 1
Part Code: *
Menu Code: **
Image Comp Code: **

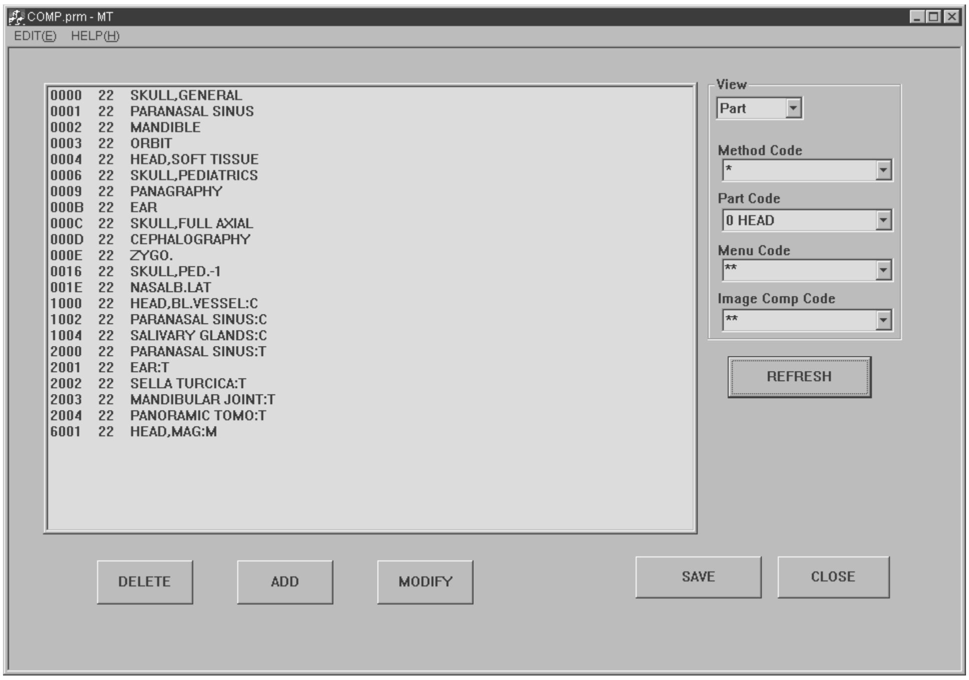
Example
Method Code: 1
Part Code: *
Menu Code: **
Image Comp. Code: **

■ To display an item with the same part code:

(1) Select "Part" in the "View" box of the "COMP prm-MT" screen.

(2) Select the desired part code and click the [REFRESH] button.

(3) The list box displays only the items with the same part code from the COMP. PRM file.



```
0000  22  SKULL,GENERAL
0001  22  PARANASAL SINUS
0002  22  MANDIBLE
0003  22  ORBIT
0004  22  HEAD,SOFT TISSUE
0006  22  SKULL,PEDIATRICS
0009  22  PANAGRAPHY
000B  22  EAR
000C  22  SKULL,FULL AXIAL
000D  22  CEPHALOGRAPHY
000E  22  ZYGO.
0016  22  SKULL,PED.-1
001E  22  NASALB.LAT
1000  22  HEAD,BL.VESSEL:C
1002  22  PARANASAL SINUS:C
1004  22  SALIVARY GLANDS:C
2000  22  PARANASAL SINUS:T
2001  22  EAR:T
2002  22  SELLA TURCICA:T
2003  22  MANDIBULAR JOINT:T
2004  22  PANORAMIC TOMO:T
6001  22  HEAD,MAG:M
```

View: Part
Method Code: *
Part Code: 0 HEAD
Menu Code: **
Image Comp Code: **

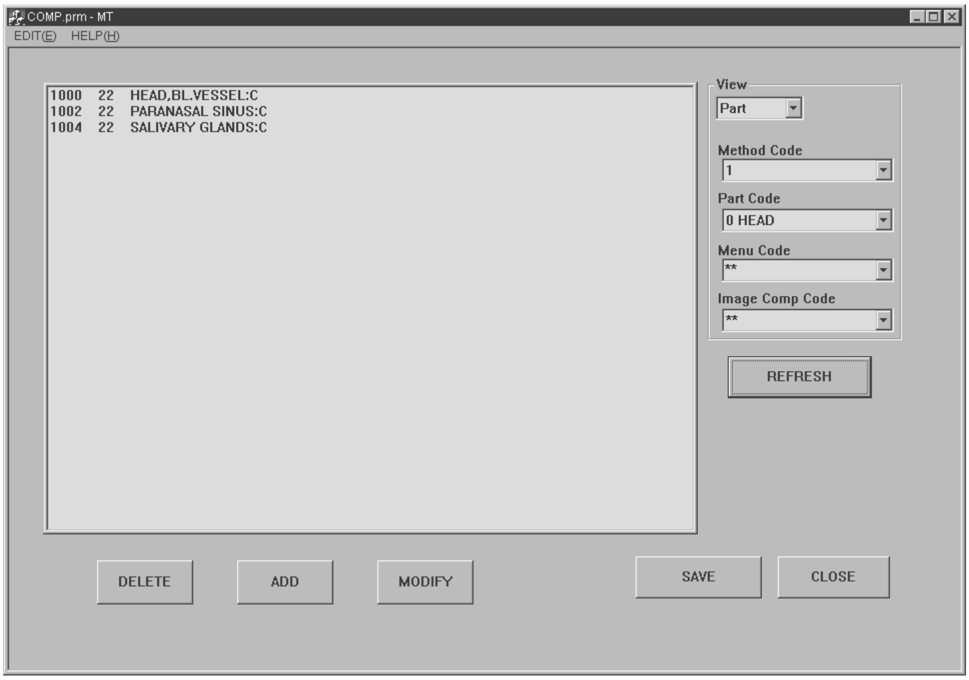
Example
Method Code: ∗
Part Code: 0 HEAD
Menu Code: ∗∗
Image Comp. Code: ∗∗

■ To display an item with the same method and part code:

(1) Select "Part" in the "View" box of the "COMP prm-MT" screen.

(2) Select the desired method code and part and click the [REFRESH] button.

(3) The list box displays only the items with the same method and part codes from the COMP. PRM file.



```
1000   22   HEAD,BL.VESSEL:C
1002   22   PARANASAL SINUS:C
1004   22   SALIVARY GLANDS:C
```

View: Part
Method Code: 1
Part Code: 0 HEAD
Menu Code: **
Image Comp Code: **

Example

Method Code: 1
Part Code: 0 HEAD
Menu Code: **
Image Comp. Code: **

1.3 Changing

This section describes how to change the COMP.PRM file.

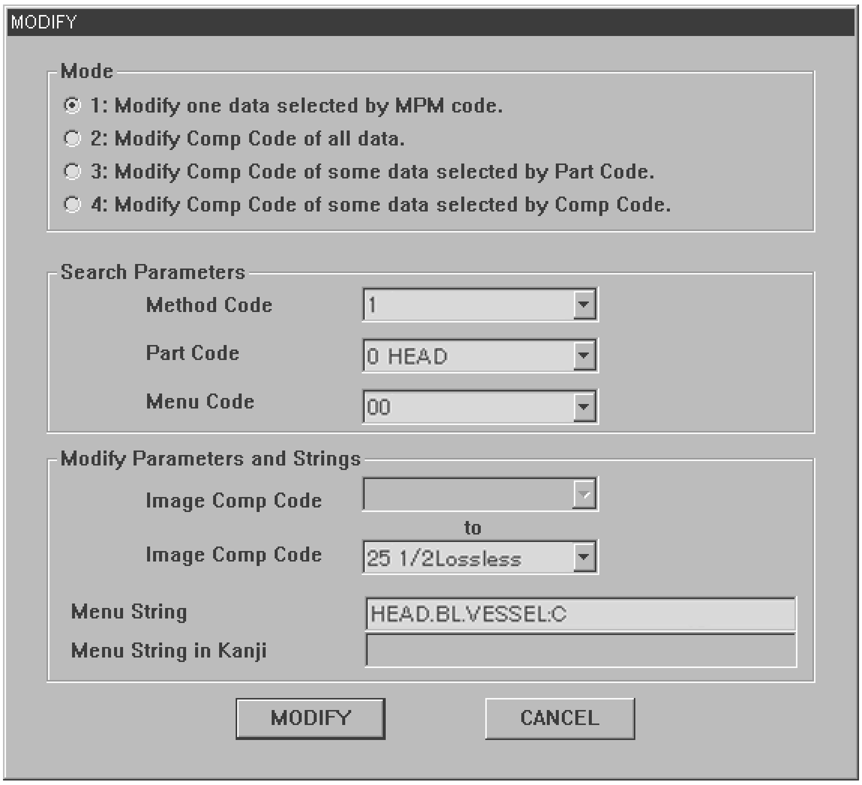
■ To change the contents of an item specified by MPM code:

(1) Click the [MODIFY] button.

(2) Click "1:Modify one data selected by MPM code" at "Mode".

(3) Select the desired method code, part code, and menu code.

(4) Enter the desired image compression code and menu string to change to.



MODIFY

Mode

● 1: Modify one data selected by MPM code.
○ 2: Modify Comp Code of all data.
○ 3: Modify Comp Code of some data selected by Part Code.
○ 4: Modify Comp Code of some data selected by Comp Code.

Search Parameters

Method Code: 1
Part Code: 0 HEAD
Menu Code: 00

Modify Parameters and Strings

Image Comp Code:
to
Image Comp Code: 25 1/2Lossless

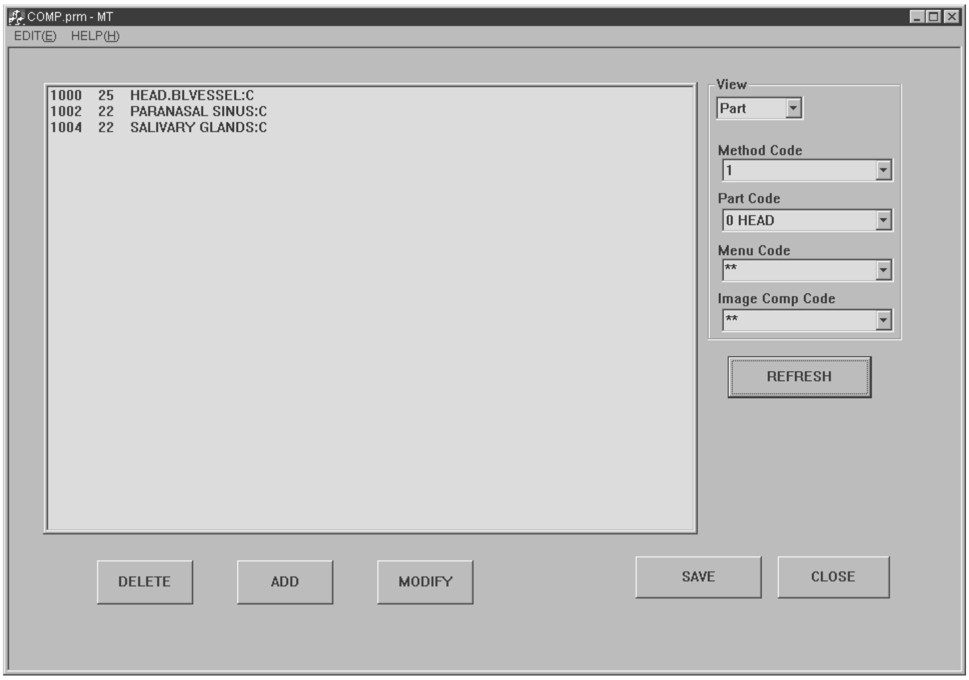
Menu String: HEAD.BL.VESSEL:C
Menu String in Kanji:

Example
Method Code: 1
Part Code: 0 HEAD
Menu Code: 00

Image Comp Code: 25 1/2 Lossless
Part Code: HEAD.BLVESSEL :C

(5) After setting, click the [MODIFY] button to return to the "COMP prm-MT" screen.

(6) Click the [REFRESH] button to display the results in the list box.


COMP.prm - MT
EDIT(E) HELP(H)
REFRESH
DELETE
ADD
MODIFY
SAVE
CLOSE

```
1000  25  HEAD.BLVESSEL:C
1002  22  PARANASAL SINUS:C
1004  22  SALIVARY GLANDS:C
```

View: Part

Method Code: 1

Part Code: 0 HEAD

Menu Code: **

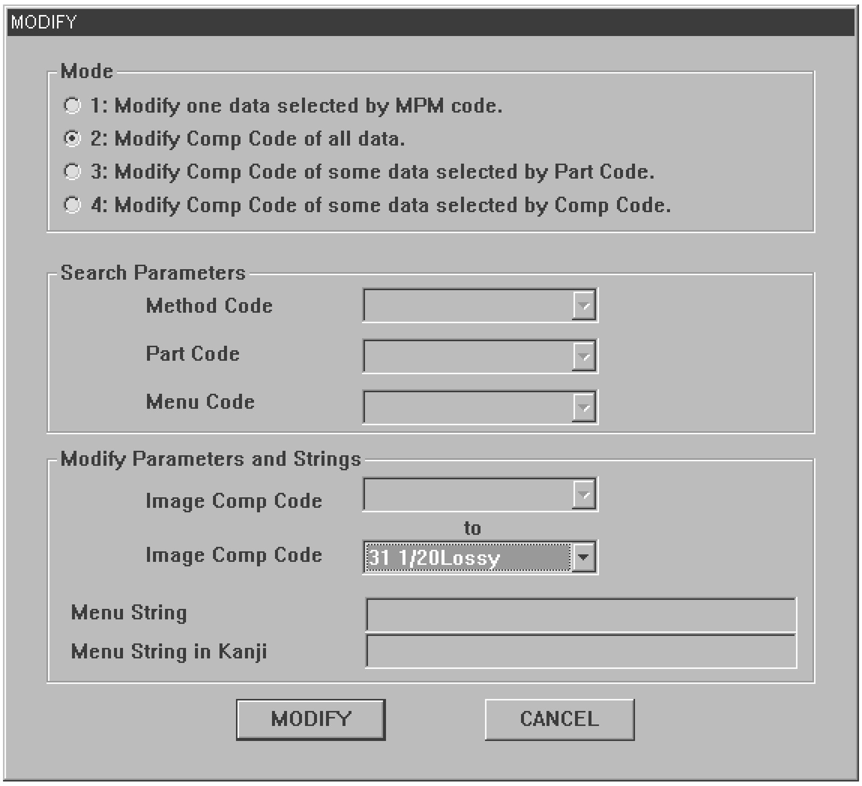
Image Comp Code: **

■ To change the compression code of all items:

(1) Click the [MODIFY] button to display the "MODIFY" screen.

(2) Click "2: Modify Comp Code of all data" at "Mode".

(3) Select the desired image compression code to change to.


MODIFY
Mode
Search Parameters
Method Code
Part Code
Menu Code
Modify Parameters and Strings
Image Comp Code
to
Menu String
Menu String in Kanji
MODIFY
CANCEL

Mode

○ 1: Modify one data selected by MPM code.
● 2: Modify Comp Code of all data.
○ 3: Modify Comp Code of some data selected by Part Code.
○ 4: Modify Comp Code of some data selected by Comp Code.

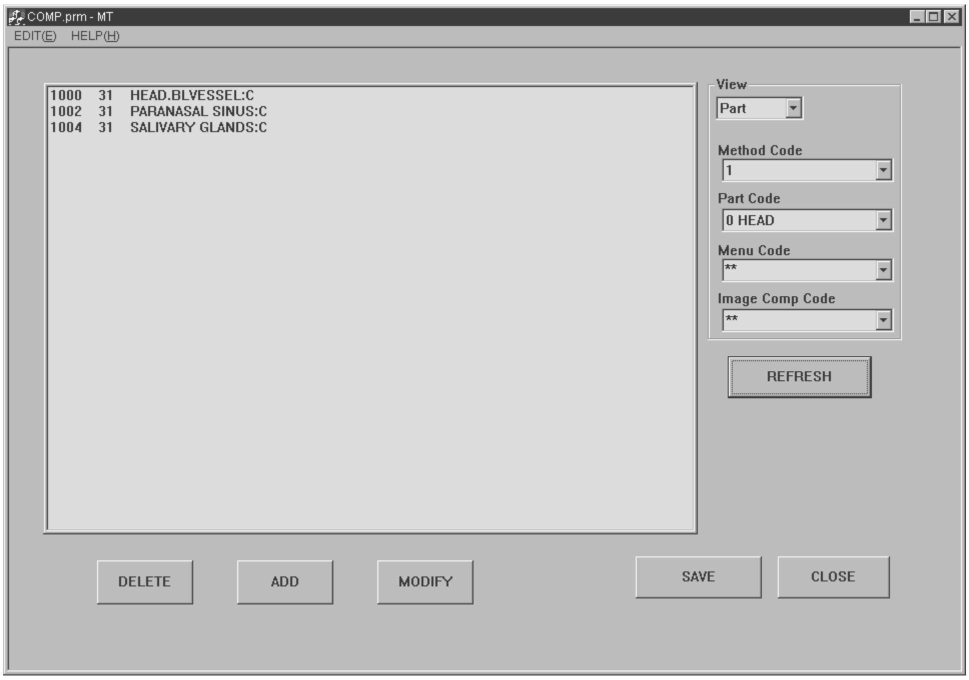
Image Comp Code to Image Comp Code: 31 1/20Lossy

Example

Compression code: 31 1/20 Lossy

(4) After setting, click the [MODIFY] button to return to the "COMP prm-MT" screen.

(5) Click the [REFRESH] button to display the results in the list box.



```
1000   31   HEAD.BLVESSEL:C
1002   31   PARANASAL SINUS:C
1004   31   SALIVARY GLANDS:C
```

View: Part

Method Code: 1

Part Code: 0 HEAD

Menu Code: **

Image Comp Code: **

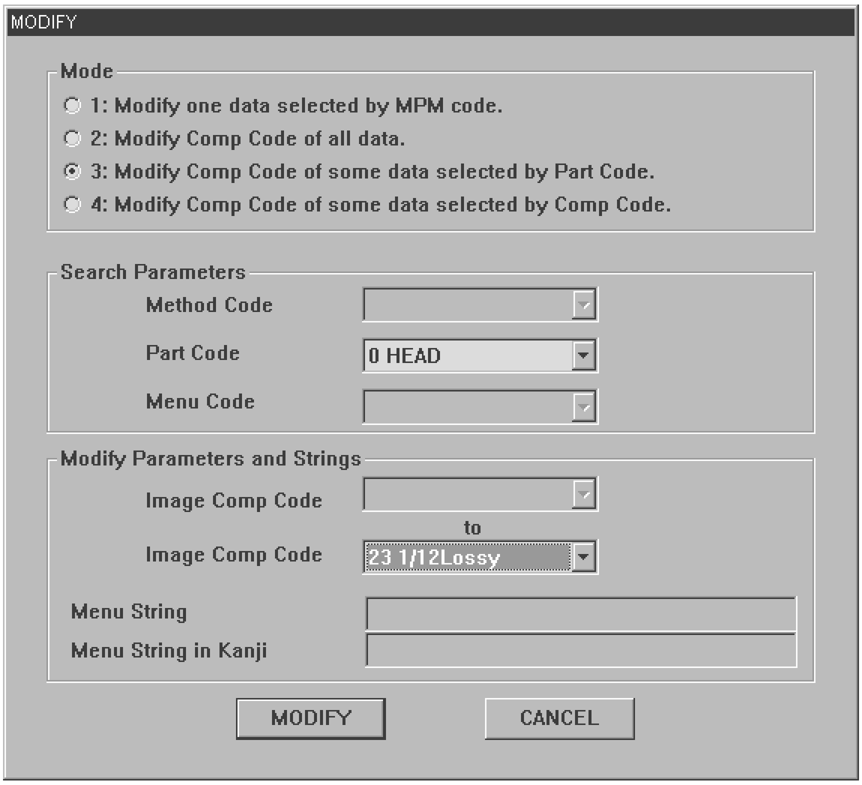
■ To change the compression code of items specified by the part code:

(1) Click the [MODIFY] button to display the "MODIFY" screen.

(2) Click "3: Modify Comp Code of some data selected by Part Code" at "Mode".

(3) Select the desired part code.

(4) Select the desired compression code to change to.



Mode
- ○ 1: Modify one data selected by MPM code.
- ○ 2: Modify Comp Code of all data.
- ● 3: Modify Comp Code of some data selected by Part Code.
- ○ 4: Modify Comp Code of some data selected by Comp Code.

Search Parameters
- Method Code:
- Part Code: 0 HEAD
- Menu Code:

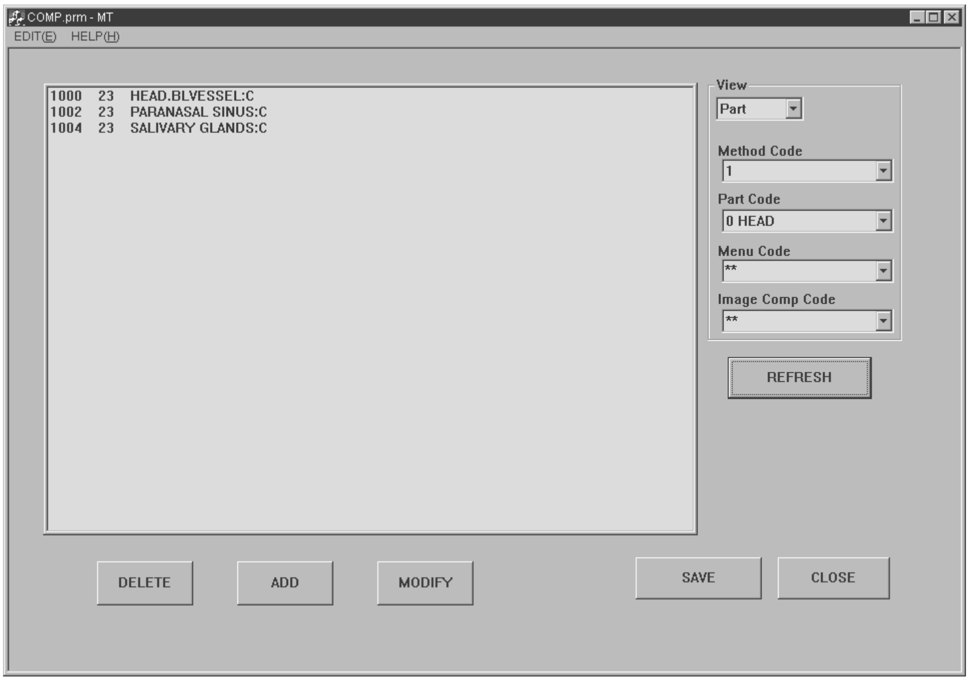
Modify Parameters and Strings
- Image Comp Code:
- to
- Image Comp Code: 23 1/12Lossy
- Menu String:
- Menu String in Kanji:

Example

Part Code: 0 HEAD

Compression code: 23 1/2Lossy

(5) After setting, click the [MODIFY] button to return to the "COMP prm-MT" screen.



```
1000   23   HEAD.BLVESSEL:C
1002   23   PARANASAL SINUS:C
1004   23   SALIVARY GLANDS:C
```

View: Part

Method Code: 1

Part Code: 0 HEAD

Menu Code: **

Image Comp Code: **

(6) Click the [REFRESH] button to display the results in the list box.

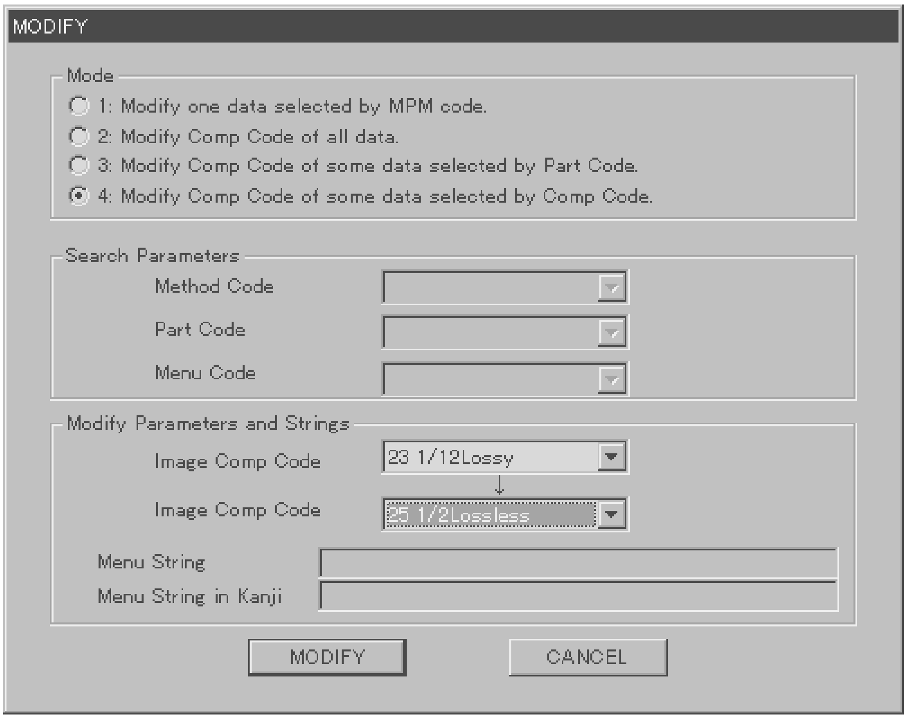
■ To change the compression code of items with the same compression code:

(1) Click the [MODIFY] button to display the "MODIFY" screen.

(2) Click "4: Modify Comp Code of come data selected by Comp Code" at "Mode".

(3) Select "Image Comp Code".

(4) Select the desired image compression code to change to.



MODIFY

Mode
○ 1: Modify one data selected by MPM code.
○ 2: Modify Comp Code of all data.
○ 3: Modify Comp Code of some data selected by Part Code.
● 4: Modify Comp Code of some data selected by Comp Code.

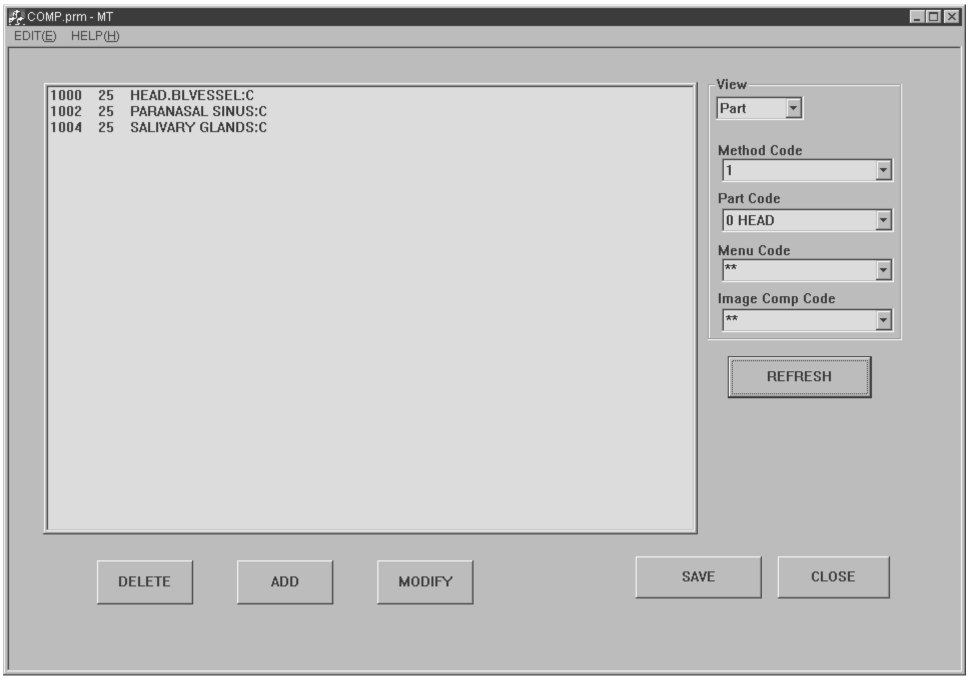
Search Parameters
Method Code:
Part Code:
Menu Code:

Modify Parameters and Strings
Image Comp Code: 23 1/12Lossy
↓
Image Comp Code: 25 1/2Lossless
Menu String:
Menu String in Kanji:

Example
Current image compression code: 23 1/2Lossy
Image compression code to change to: 25 1/2Lossless

(5) After setting, click the [MODIFY] button to return to the "COMP prm-MT" screen.

(6) Click the [REFRESH] button to display the results in the list box.



COMP.prm - MT
EDIT(E) HELP(H)
View
REFRESH
DELETE
ADD
MODIFY
SAVE
CLOSE

```
1000   25   HEAD.BLVESSEL:C
1002   25   PARANASAL SINUS:C
1004   25   SALIVARY GLANDS:C
```

View: Part

Method Code: 1

Part Code: 0 HEAD

Menu Code: **

Image Comp Code: **

1.4 Adding

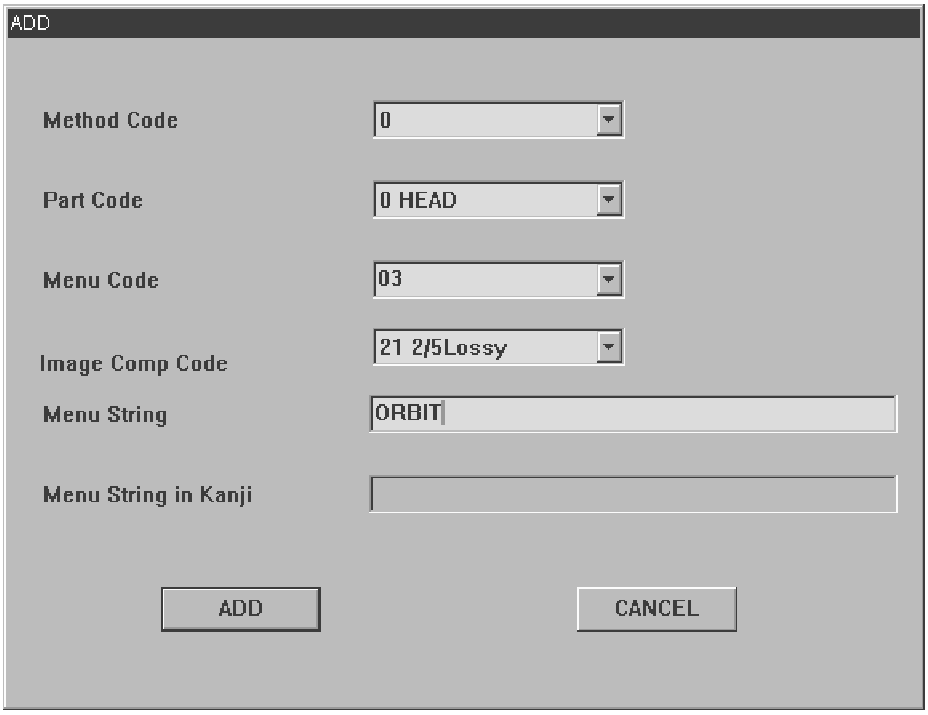
This section describes how to add to the COMP.PRM file.

■ To add items specified by the MPM code:

(1) Click the [ADD] button to display the "ADD" screen.

(2) Enter the method, part and menu codes of the item to be added and the compression code.

(3) Enter the desired menu string.


ADD
Method Code
Part Code
Menu Code
Image Comp Code
Menu String
Menu String in Kanji
ADD
CANCEL

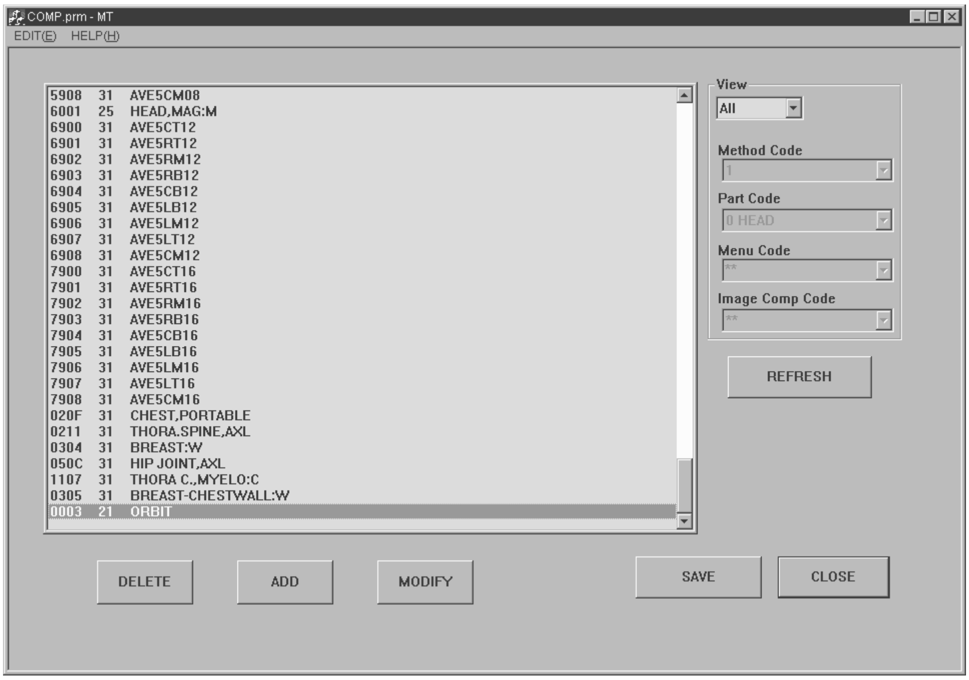
Method Code: 0
Part Code: 0 HEAD
Menu Code: 03
Image Comp Code: 21 2/5Lossy
Menu String: ORBIT
Menu String in Kanji:

Example

*Method Code:	0
*Part Code:	0 HEAD
*Menu Code:	03
*Image Comp Code:	21 2/5 Lossy
*Menu String:	ORBIT

(4) After setting, click the [ADD] button to return to the "COMP prm-MT" screen.

(5) Click the [REFRESH] button to display the results in the list box.



```
5908   31   AVE5CM08
6001   25   HEAD,MAG:M
6900   31   AVE5CT12
6901   31   AVE5RT12
6902   31   AVE5RM12
6903   31   AVE5RB12
6904   31   AVE5CB12
6905   31   AVE5LB12
6906   31   AVE5LM12
6907   31   AVE5LT12
6908   31   AVE5CM12
7900   31   AVE5CT16
7901   31   AVE5RT16
7902   31   AVE5RM16
7903   31   AVE5RB16
7904   31   AVE5CB16
7905   31   AVE5LB16
7906   31   AVE5LM16
7907   31   AVE5LT16
7908   31   AVE5CM16
020F   31   CHEST,PORTABLE
0211   31   THORA.SPINE,AXL
0304   31   BREAST:W
050C   31   HIP JOINT,AXL
1107   31   THORA C.,MYELO:C
0305   31   BREAST-CHESTWALL:W
0003   21   ORBIT
```

View: All

Method Code: 1

Part Code: 0 HEAD

Menu Code: **

Image Comp Code: **

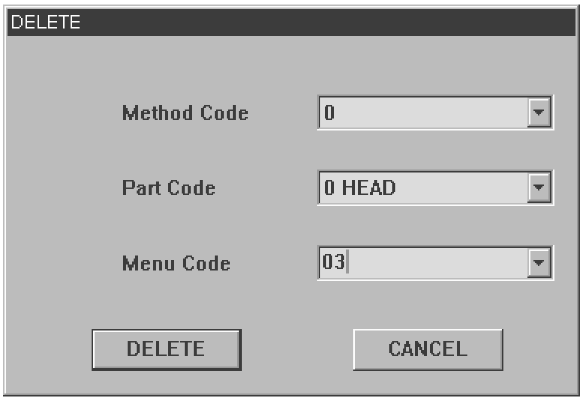
1.5 Deleting

This section describes how to delete items in the COMP. PRM file.

■ To delete items specified by the MPM code:

(1) Click the [DELETE] button to display the "DELETE" screen.

(2) Enter the method, part and menu codes of the item to be deleted.

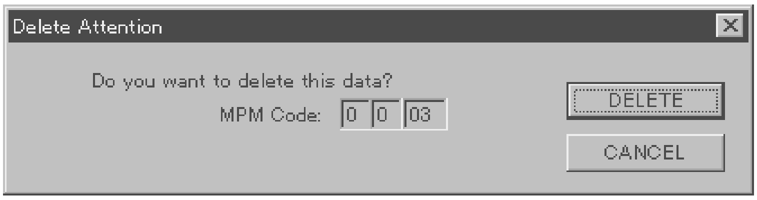


Method Code: 0
Part Code: 0 HEAD
Menu Code: 03

Example
Method Code: 0
Part Code: 0 HEAD
Menu Code: 03

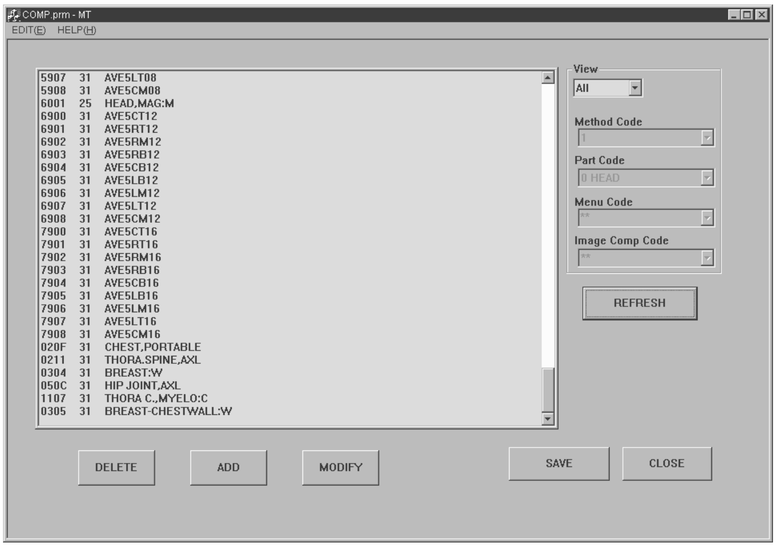
(3) After setting, click the [DELETE] button.

(4) Confirm the deletion by clicking [DELETE].



Do you want to delete this data?
MPM Code: 0 0 03

(5) When the "COMP prm-MT" screen appears, click the [REFRESH] button to display the results in the list box.



```
5907   31   AVE5LT08
5908   31   AVE5CM08
6001   25   HEAD,MAG:M
6900   31   AVE5CT12
6901   31   AVE5RT12
6902   31   AVE5RM12
6903   31   AVE5RB12
6904   31   AVE5CB12
6905   31   AVE5LB12
6906   31   AVE5LM12
6907   31   AVE5LT12
6908   31   AVE5CM12
7900   31   AVE5CT16
7901   31   AVE5RT16
7902   31   AVE5RM16
7903   31   AVE5RB16
7904   31   AVE5CB16
7905   31   AVE5LB16
7906   31   AVE5LM16
7907   31   AVE5LT16
7908   31   AVE5CM16
020F   31   CHEST,PORTABLE
0211   31   THORA.SPINE,AXL
0304   31   BREAST:W
050C   31   HIP JOINT,AXL
1107   31   THORA C.,MYELO:C
0305   31   BREAST-CHESTWALL:W
```

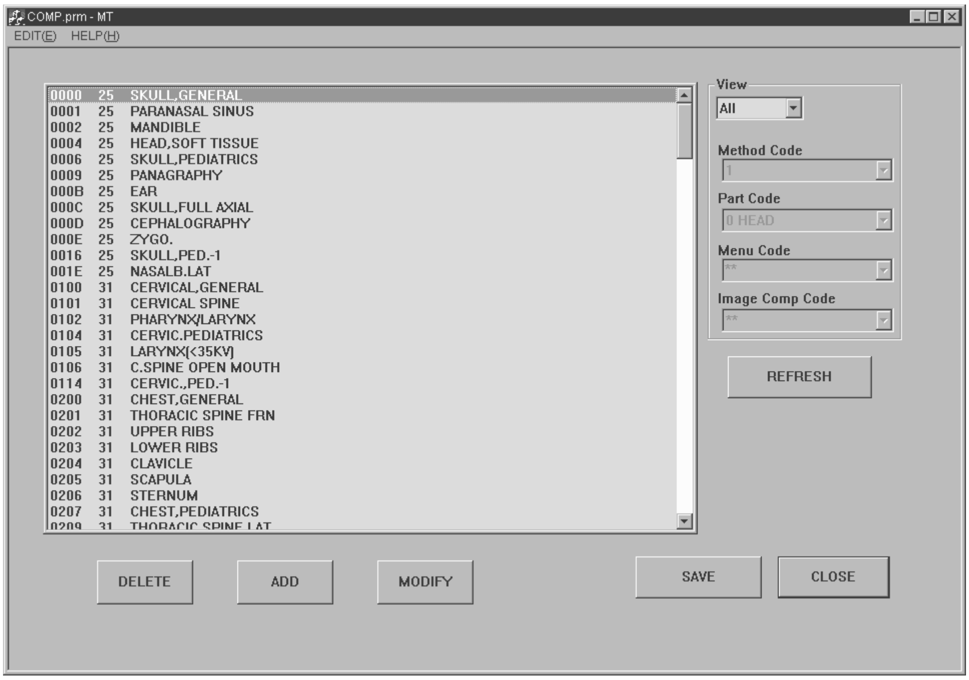
View: All
Method Code: 1
Part Code: 0 HEAD
Menu Code: **
Image Comp Code: **

1.6 Double-Clicking to Change/Add/Delete

Items in the list box can also be changed, added, and deleted by double-clicking them.

■ To change items selected by double-clicking:

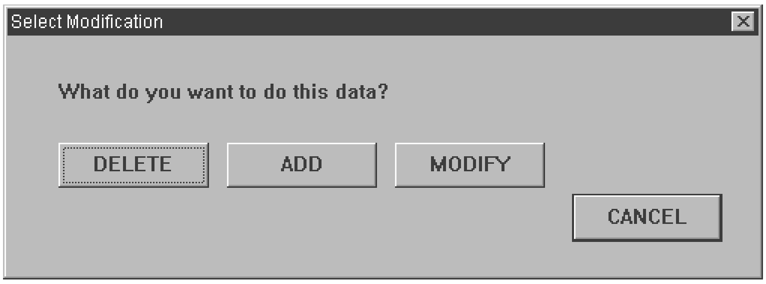
(1) Double-click the item to be changed in the list box of the "COMP prm-MT" screen.
The "Select Modification" dialog box appears.



```
0000  25  SKULL,GENERAL
0001  25  PARANASAL SINUS
0002  25  MANDIBLE
0004  25  HEAD,SOFT TISSUE
0006  25  SKULL,PEDIATRICS
0009  25  PANAGRAPHY
000B  25  EAR
000C  25  SKULL,FULL AXIAL
000D  25  CEPHALOGRAPHY
000E  25  ZYGO.
0016  25  SKULL,PED.-1
001E  25  NASALB.LAT
0100  31  CERVICAL,GENERAL
0101  31  CERVICAL SPINE
0102  31  PHARYNX/LARYNX
0104  31  CERVIC.PEDIATRICS
0105  31  LARYNX(<35KV)
0106  31  C.SPINE OPEN MOUTH
0114  31  CERVIC.,PED.-1
0200  31  CHEST,GENERAL
0201  31  THORACIC SPINE FRN
0202  31  UPPER RIBS
0203  31  LOWER RIBS
0204  31  CLAVICLE
0205  31  SCAPULA
0206  31  STERNUM
0207  31  CHEST,PEDIATRICS
0209  31  THORACIC SPINE LAT
```

View: All
Method Code: 1
Part Code: 0 HEAD
Menu Code: **
Image Comp Code: **

(2) Click the [MODIFY] button in this dialog box.



What do you want to do this data?

(3) The "MODIFY" dialog box appears. Change as desired and click the [MODIFY] button.

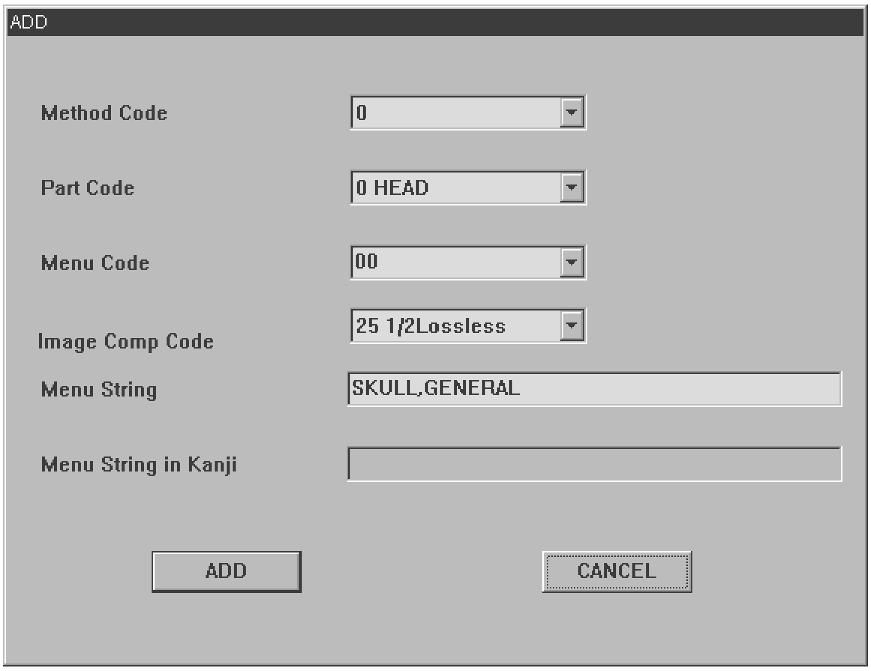
(4) The "COMP prm-MT" screen returns.
Click the [REFRESH] button to display the results in the list box.

■ To add items selected by double-clicking:

(1) Double-click the item to be added to the list box of the "COMP prm-MT" screen.
The "Select Modification" dialog box appears.

(2) Click the [ADD] button in this dialog box.

(3) The "ADD" dialog box appears. Enter in the required boxes and click the [ADD] button.



Method Code: 0

Part Code: 0 HEAD

Menu Code: 00

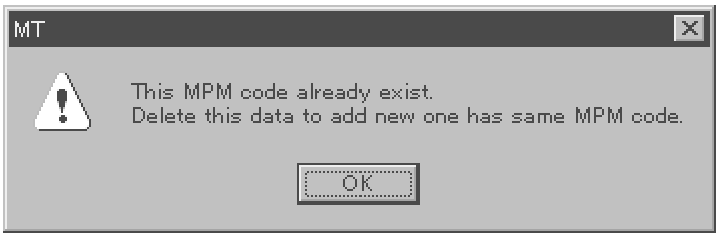
Image Comp Code: 25 1/2Lossless

Menu String: SKULL,GENERAL

Menu String in Kanji:

◆ NOTE ◆

As this function is designed to minimize input items, clicking the [ADD] button without changing the MPM code will display the following error message.



This MPM code already exist.
Delete this data to add new one has same MPM code.

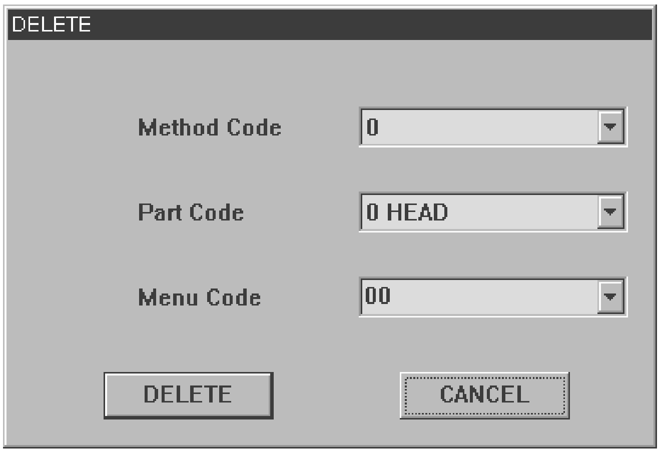
(4) The "COMP prm-MT" screen returns.
Click the [REFRESH] button to display the results in the list box.

■ To delete items selected by double-clicking:

(1) Double-click the item to be deleted from the list box of the "COMP prm-MT" screen.
The "Select Modification" dialog box appears.

(2) Click the [DELETE] button in this dialog box.

(3) The "DELETE" dialog box appears. Enter in the required boxes and click the [DELETE] button.

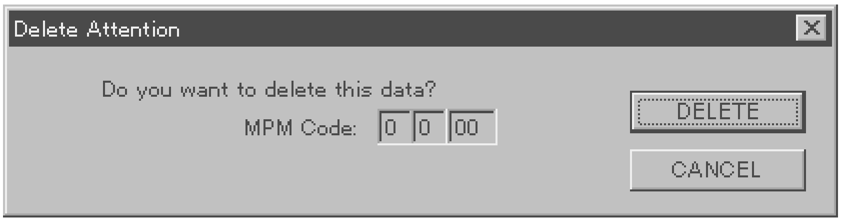


Method Code: 0

Part Code: 0 HEAD

Menu Code: 00

(4) Confirm the deletion by clicking the [DELETE] button.



Do you want to delete this data?

MPM Code: 0 0 00

(5) The "COMP prm-MT" screen returns.
Click the [REFRESH] button to display the results in the list box.

1.7 Saving

■ To save changes:

(1) Click the [SAVE] button in the "COMP prm-MT" screen.

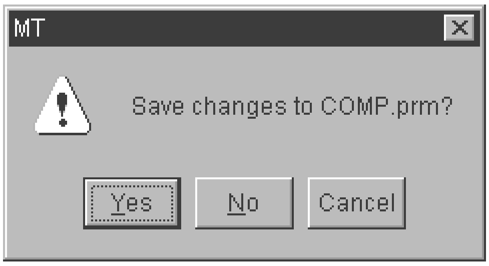
◆ NOTE ◆

Saving will not quit ComPrm.exe.

1.8 Quitting

■ To quit the application:

(1) Click the [CLOSE] button in the "COMP prm-MT" screen.
If changes made have not been saved, the following dialog box appears.



MT

Save changes to COMP.prm?

Appendix 2. Upgrading Software to Version A02

2.1 Software Upgrade Procedures to Version A02

The following setups are necessary. Be sure to observe order of setups shown below.

- Software installation
- File copy
- Registry setup
- Converter startup
- Database restructuring

❍ Have the following ready for use.

- QA-WS version A02 software installation CD-ROM (“AP-CD” hereinafter)

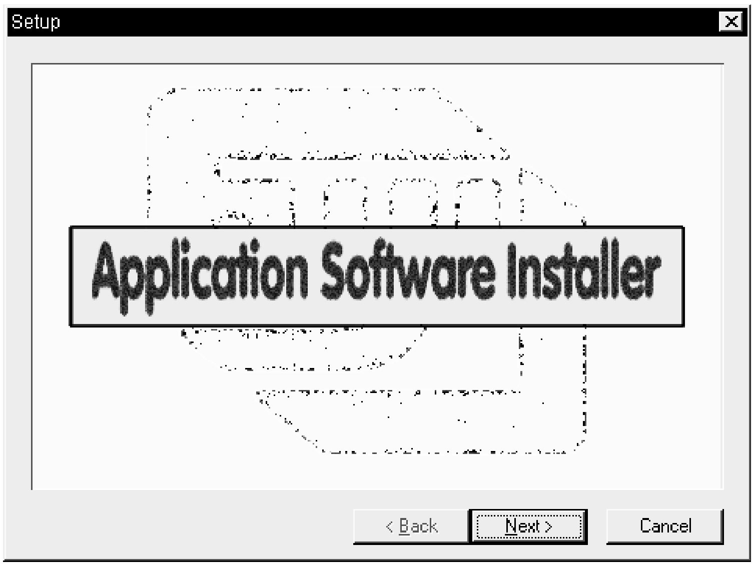
■ Software installation:

Install the A02 version software as follows.

(1) Insert the AP-CD into the CD-ROM drive.

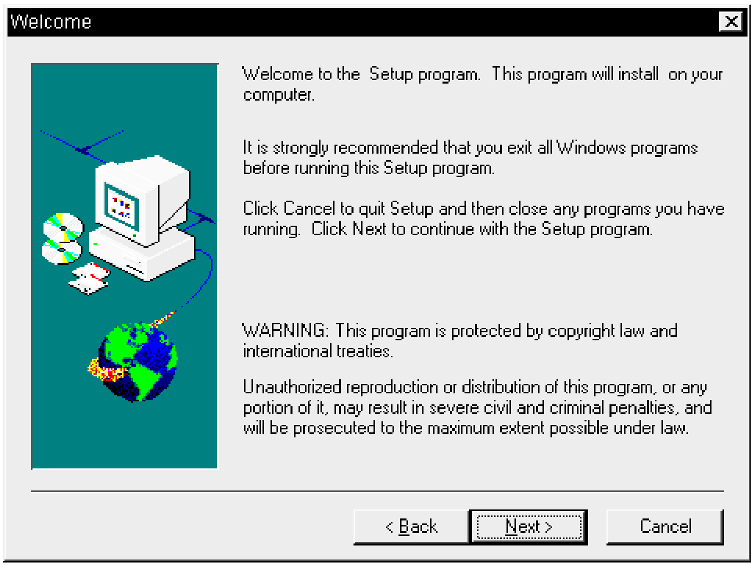
➔ After a while, the “Setup” screen appears.

(2) Click [Next].



FR5H0000.EPS

(3) Click [Next].



Welcome

Welcome to the Setup program. This program will install on your computer.

It is strongly recommended that you exit all Windows programs before running this Setup program.

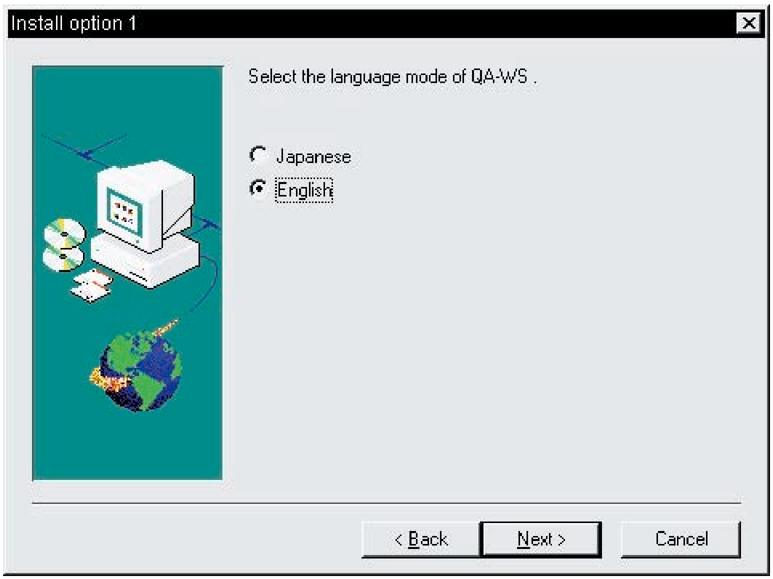
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

FR5H0001.EPS

(4) Select “Japanese” or “English” for the language to be used and click [Next].



Install option 1

Select the language mode of QA-WS .

○ Japanese
● English

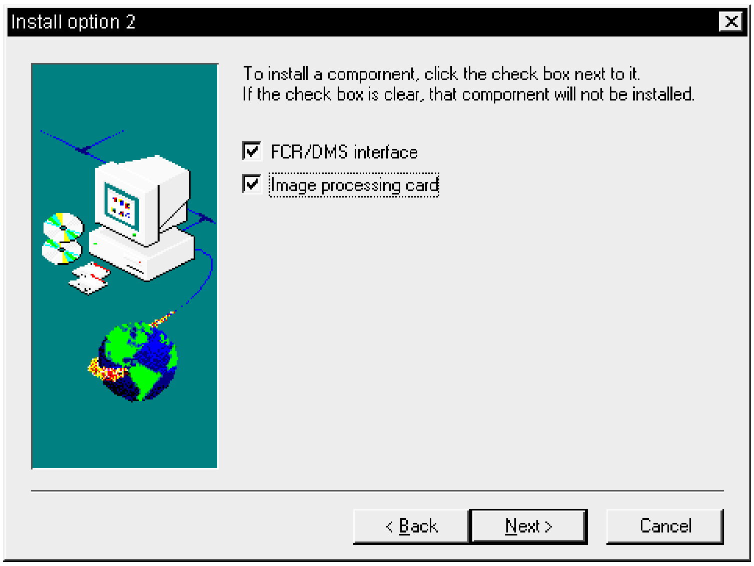
FR5H0002.EPS

(5) Depending on the board to be used, check items as necessary and click [Next].

- ☐ FCR/DMS interface : If using an E-i/f
- ☐ Image processing card : If using an Image processing board

◆ NOTE ◆

If image processing board has been installed, be sure to check "Image processing card."



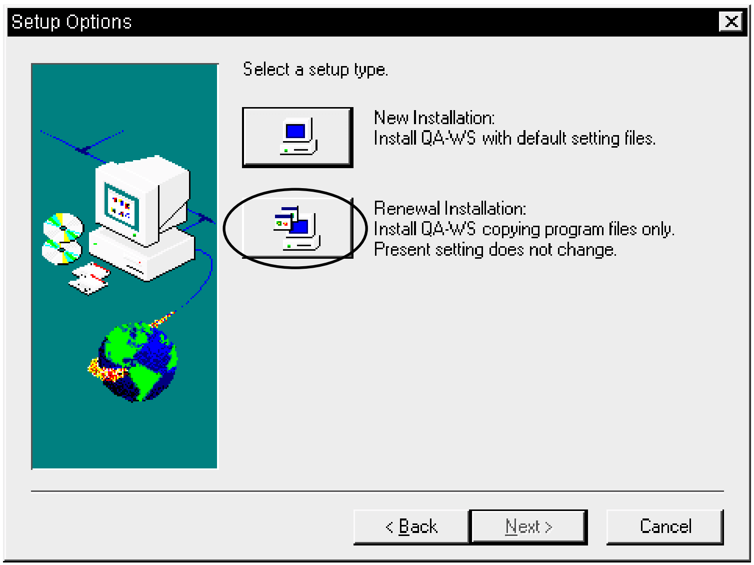
Install option 2

To install a component, click the check box next to it.
If the check box is clear, that component will not be installed.

☑ FCR/DMS interface
☑ Image processing card

FR5H0003.EPS

(6) For the setup type, click "Renewal Installation."



Setup Options

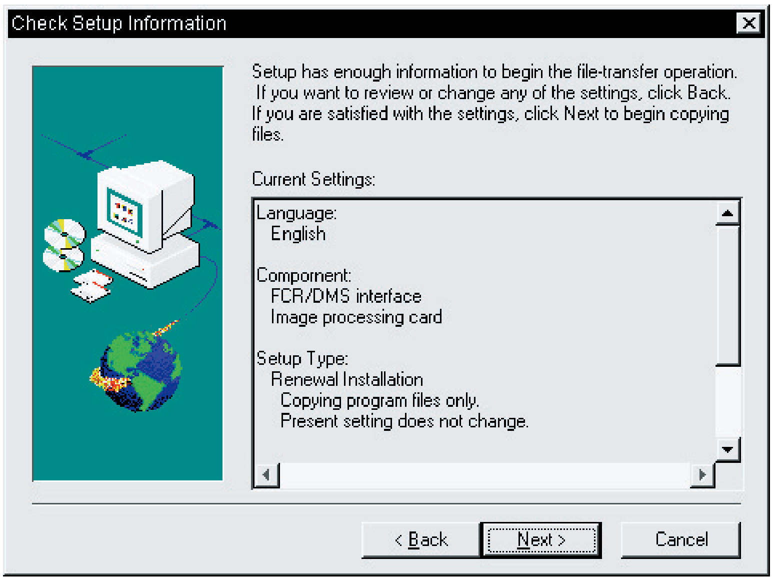
Select a setup type.

New Installation:
Install QA-WS with default setting files.

Renewal Installation:
Install QA-WS copying program files only.
Present setting does not change.

FR5H0004.EPS

(7) Make sure that the content of the “Current Settings:” is as actually has been specified and click [Next].



Setup has enough information to begin the file-transfer operation. If you want to review or change any of the settings, click Back. If you are satisfied with the settings, click Next to begin copying files.

Current Settings:

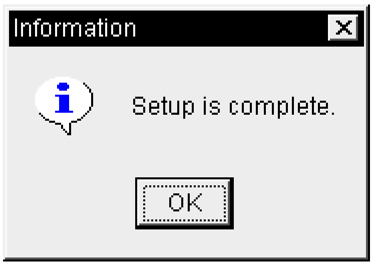
Language:
English

Compornent:
FCR/DMS interface
Image processing card

Setup Type:
Renewal Installation
Copying program files only.
Present setting does not change.

FR5H0005.EPS

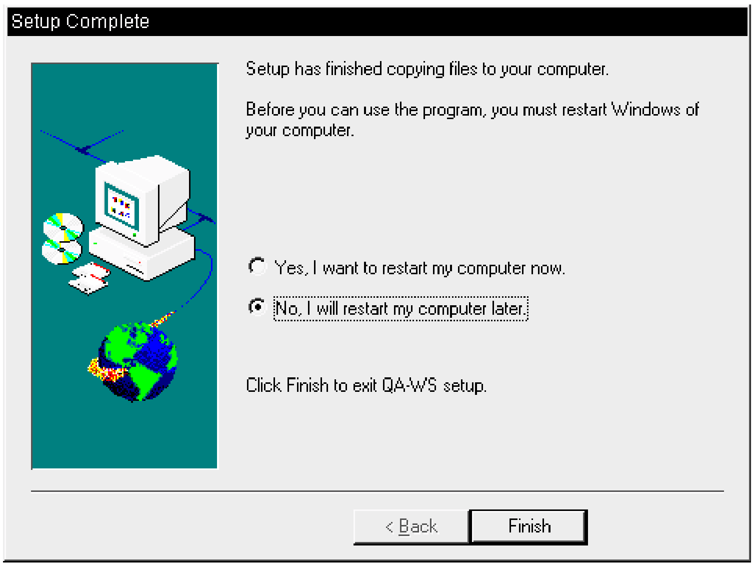
(8) Click [OK].



Setup is complete.

FR5H0006.EPS

(9) Select “No, I will restart my computer later.” and select [Finish].



Setup has finished copying files to your computer.

Before you can use the program, you must restart Windows of your computer.

○ Yes, I want to restart my computer now.
● No, I will restart my computer later.

Click Finish to exit QA-WS setup.

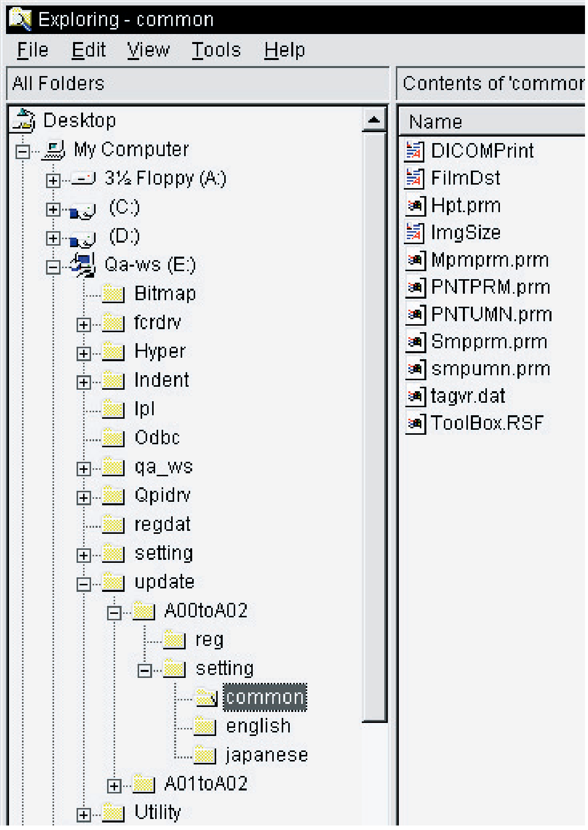
FR5H0007.EPS

■ File copy:

Copy files from the AP-CD to the hard disk as necessary.

(1) Open the following folders.

- To upgrade software version from A00 to A02
  "CD-ROM drive\update\A00toA02\setting\common"
- To upgrade software version from A01 to A02
  "CD-ROM drive\update\A01toA02\setting\common"


Exploring - common
File
Edit
View
Tools
Help
All Folders
Contents of 'commor
Desktop
My Computer
3½ Floppy (A:)
(C:)
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
update
A00toA02
reg
setting
common
english
japanese
A01toA02
Utility
Name
DICOMPrint
FilmDst
Hpt.prm
ImgSize
Mpmprm.prm
PNTPRM.prm
PNTUMN.prm
Smpprm.prm
smpumn.prm
tagvr.dat
ToolBox.RSF

FR5H0008.EPS

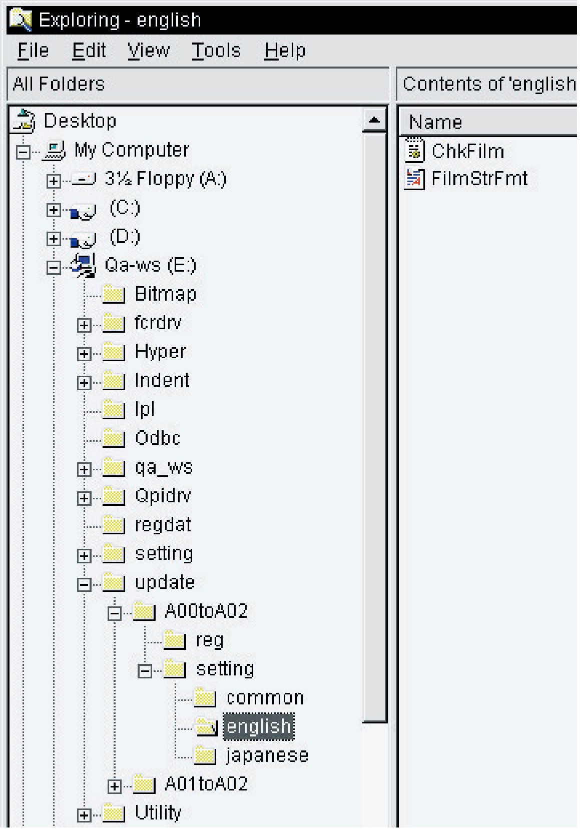
(2) Copy all the files contained in the "common" folder to "Hi-cx" in the "Program Files" folder of the "C" drive.

(3) Open the following folders.

- To upgrade software version from A00 to A02
  "CD-ROM drive\update\A00toA02\setting\japanese or english"
- To upgrade software version from A01 to A02
  "CD-ROM drive\update\A01toA02\setting\japanese or english"

◆ *NOTE* ◆

For whether "japanese" or "english," be sure to select the same folder as the language that has been selected for AP installation.

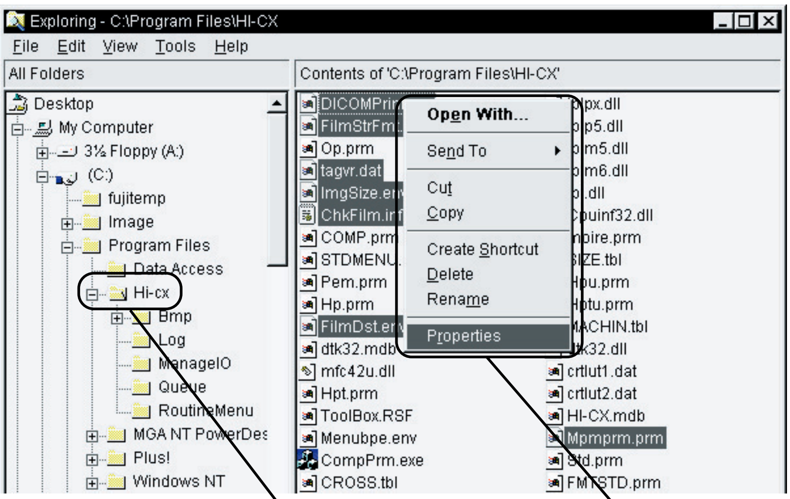

Exploring - english
File
Edit
View
Tools
Help
All Folders
Contents of 'english
Desktop
My Computer
3½ Floppy (A:)
(C:)
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
update
A00toA02
reg
setting
common
english
japanese
A01toA02
Utility
Name
ChkFilm
FilmStrFmt

FR5H0009.EPS

(4) Copy all the files contained in the "japanese" or "english" folder to "Hi-cx" in the "Program Files" folder of the "C" drive.

(5) From "Hi-cx" contained in the "Program Files" folder of the "C" drive, select all the files copied in steps (2) and (4) above

(6) Right-click the mouse to select “Properties” dialog box from the menu.

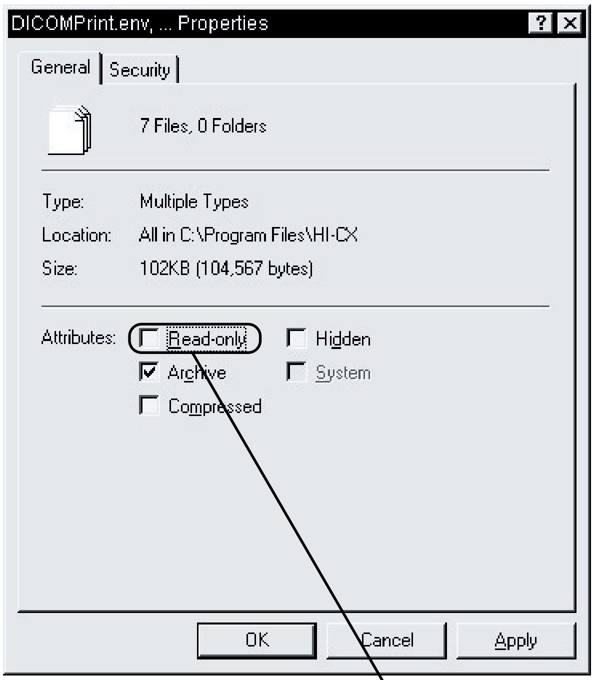

Exploring - C:\Program Files\HI-CX
File Edit View Tools Help
All Folders
Contents of 'C:\Program Files\HI-CX'
Desktop
My Computer
3½ Floppy (A:)
(C:)
fujitemp
Image
Program Files
Data Access
Hi-cx
Bmp
Log
ManageIO
Queue
RoutineMenu
MGA NT PowerDes
Plus!
Windows NT
DICOMPrin
FilmStrFm
Op.prm
tagvr.dat
ImgSize.en
ChkFilm.in
COMP.prm
STDMENU
Pem.prm
Hp.prm
FilmDst.en
dtk32.mdb
mfc42u.dll
Hpt.prm
ToolBox.RSF
Menubpe.env
CompPrm.exe
CROSS.tbl
Open With...
Send To
Cut
Copy
Create Shortcut
Delete
Rename
Properties
px.dll
p5.dll
m5.dll
m6.dll
.dll
uinf32.dll
pire.prm
IZE.tbl
pu.prm
tu.prm
ACHIN.tbl
k32.dll
crtlut1.dat
crtlut2.dat
HI-CX.mdb
Mpmprm.prm
Std.prm
FMTSTD.prm

Menu

Folder selected for AP installation

FR5H0010.EPS

(7) Deselect “Read-only” and click [OK].


DICOMPrint.env, ... Properties
General
Security
Attributes:
☐ Read-only
☐ Hidden
☑ Archive
☐ System
☐ Compressed
OK
Cancel
Apply

7 Files, 0 Folders

Type: Multiple Types

Location: All in C:\Program Files\HI-CX

Size: 102KB (104,567 bytes)

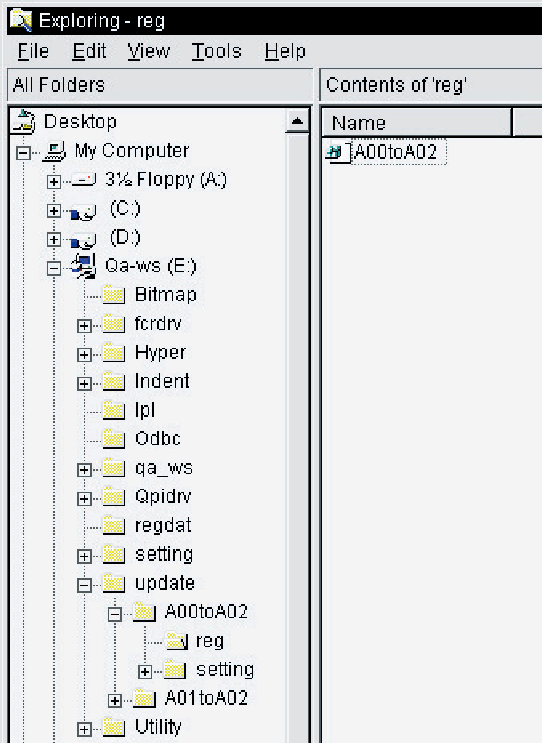
For read only

FR5H0011.EPS

■ Registry setup:

(1) Open the following folders.

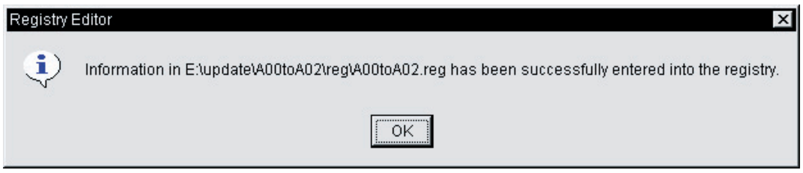
- To upgrade software version from A00 to A02
  "CD-ROM drive\update\A00toA02\reg"
- To upgrade software version from A01 to A02
  "CD-ROM drive\update\A01toA02\reg"


Exploring - reg
File
Edit
View
Tools
Help
All Folders
Contents of 'reg'
Desktop
My Computer
3½ Floppy (A:)
(C:)
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
update
A00toA02
reg
setting
A01toA02
Utility
Name
A00toA02

FR5H0012.EPS

(2) Double-click the registry file contained in the "reg" folder.

(3) Click [OK].


Registry Editor
OK

Information in E:\update\A00toA02\reg\A00toA02.reg has been successfully entered into the registry.

FR5H0013.EPS

■ Image information file conversion

File must be converted because the content of the image information file is not the same as that of previous versions.

(1) Open the folder below.
"C:\Program Files\HI_CX"

(2) Double-click [ImgInfoConv].

(3) Click [Convert].
➔ A window opens to indicate the completion of conversion processing.

(4) Click [OK].

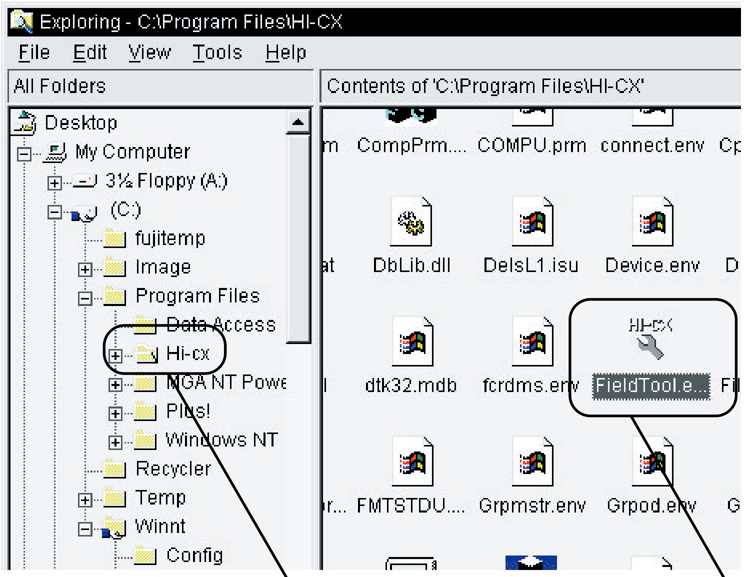
(5) Click [Exit].

■ Database restructuring:

When the AP version has been upgraded, the database should be restructured.

(1) Open the folder below.
“C:\Program Files\Hi-cx”

(2) Double-click “FieldTool.exe” file.

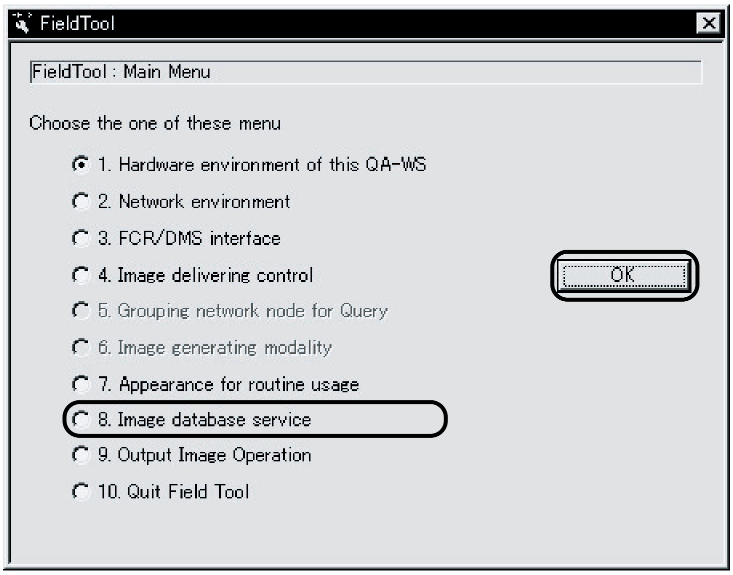

Exploring - C:\Program Files\HI-CX
File
Edit
View
Tools
Help
All Folders
Contents of 'C:\Program Files\HI-CX'
Desktop
My Computer
3½ Floppy (A:)
(C:)
fujitemp
Image
Program Files
Data Access
Hi-cx
MGA NT Powe
Plus!
Windows NT
Recycler
Temp
Winnt
Config
CompPrm....
COMPU.prm
connect.env
DbLib.dll
DelsL1.isu
Device.env
dtk32.mdb
fcrdms.env
FieldTool.e...
FMTSTDU....
Grpmstr.env
Grpod.env

Hi-cx folder

FieldTool.exe file

FR5H0014.EPS

(3) Select “8.Image database service” and click [OK].

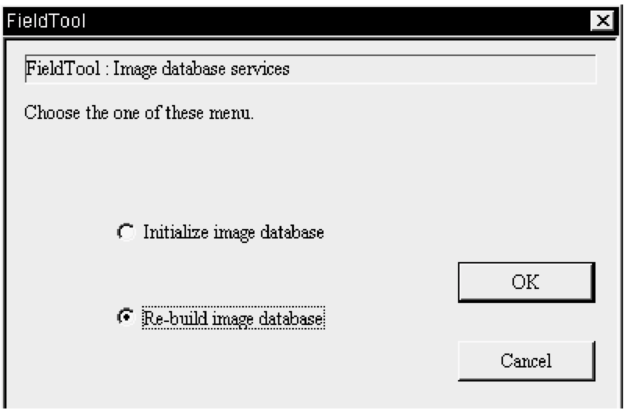

FieldTool
1. Hardware environment of this QA-WS
2. Network environment
3. FCR/DMS interface
4. Image delivering control
5. Grouping network node for Query
6. Image generating modality
7. Appearance for routine usage
8. Image database service
9. Output Image Operation
10. Quit Field Tool
OK

FieldTool : Main Menu

Choose the one of these menu

FR5H0031.EPS

(4) Select “Re-build image database” and click [OK].

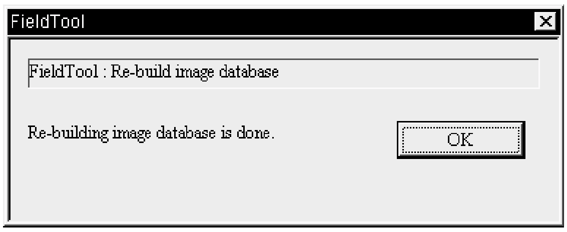

FieldTool
Initialize image database
Re-build image database
OK
Cancel

FieldTool : Image database services

Choose the one of these menu.

FR5H0016.EPS

(5) Click [OK].


FieldTool
OK

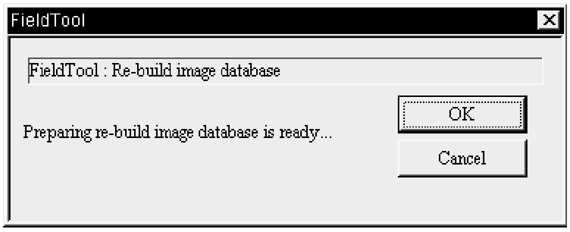
FieldTool : Re-build image database

Re-building image database is done.

FR5H0017.EPS

➔ Database will be restructured.

(6) Click [OK].


FieldTool
OK
Cancel

FieldTool : Re-build image database

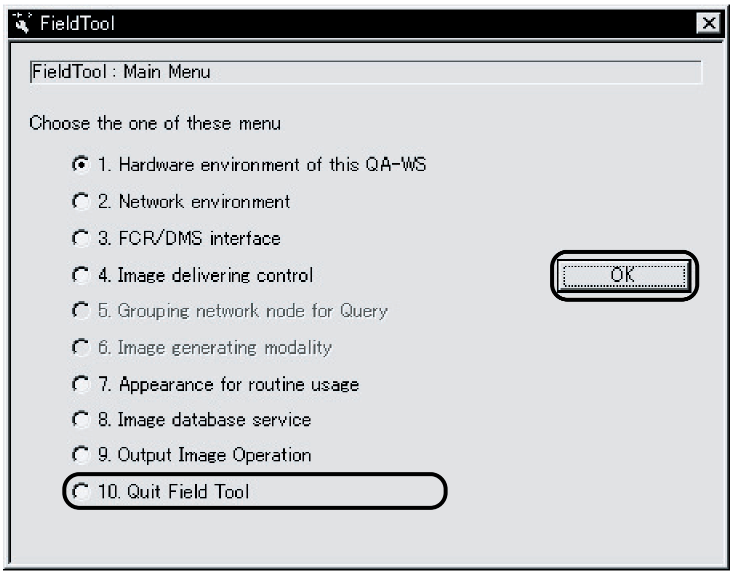
Preparing re-build image database is ready...

FR5H0018.EPS

(7) Click [Cancel] several times.

➔ You are returned to the Field Tool Main Menu.

(8) Select “10.Quit Filed Tool” and click [OK].



FieldTool

FieldTool : Main Menu

Choose the one of these menu

● 1. Hardware environment of this QA-WS

○ 2. Network environment

○ 3. FCR/DMS interface

○ 4. Image delivering control

○ 5. Grouping network node for Query

○ 6. Image generating modality

○ 7. Appearance for routine usage

○ 8. Image database service

○ 9. Output Image Operation

○ 10. Quit Field Tool

FR5H0015.EPS

➔ The Field Tool Main Menu will quit.

2.2 ID Information Composite Function

In case the ID information (Patient ID and Accession Number) which is to be sent from the ID-Gateway exceeds ten characters and the IDT cannot receive the ID information because of IDT models or software versions, the ID-Gateway splits the original ID data into two portions according to the FUJI protocol (FINP or E-i/f) so that the IDT can receive all the ID data.

The ID-Gateway splits the original data into two portions as follows. Values included between parentheses refer to the number of characters. The number of characters for the Requesting Service is fixed at eight characters.

- Original Patient ID (10+m) →
  Patient ID (10) + Requesting Service region (m), in accordance with the FUJI protocol
- Original Accession Number (10+n) →
  Accession Number (10) + Requesting Service region (n), in accordance with the FUJI protocol

m : 0 to 8
n : 0 to 6
where, $m + n \leqq 8$

When Patient ID and/or Accession Number data split as shown above is delivered to the QA-WS via IDT or Image Reader, the QA-WS subjects such split data to ID information composite processing, in accordance with as specified by the FieldTool so that such split data can be restored to the original data and stored as the DICOM tag.

This function can handle a maximum of 18 characters for a Patient ID and 16 for an Accession Number. However, when both a Patient ID and an Accession Number exceed a maximum of ten characters, the sum of the number of characters exceeding the limit must be within eight.

The data that has been subjected to composite processing will be output by the QA-WS to DICOM-specified equipment in accordance with the DICOM protocol.
Moreover, image data will be output as composed also to FINP-specified equipment if it can handle data that exceeds ten characters or is provided with software of version that can be used for such purposes.

If the composed data is output by the QA-WS to equipment that is not available for handling ID data exceeding ten characters or to equipment that is not provided with software of version available for such purposes, the composed data will be output being split again.
ID data will be split by reversing the composite procedure and specified padding characters (spaces or zeros) will come in the empty data area.

● Information composite processing

❍ Processing for when inputting image data via FINP, FNIP and E-i/f

- Patient ID
  1. According to the FieldTool setup, extracts image data information stored in the Patient ID region (max. ten characters) and saves it in the same region (max. 64 characters) after it has been subjected to information composite processing.
  2. According to the FieldTool setup, extracts image data information stored in the Requesting Service region (fixed at eight characters) and saves it in the same region after it has been subjected to information composite processing.
- Accession Number
  1. According to the FieldTool setup, extracts image data information stored in the Accession Number region (fixed at ten characters) and saves it in the Accession Number region (max. 16 characters).
  2. According to the FieldTool setup, extracts image data information stored in the Requesting Service region (fixed at eight characters) and saves it in the Accession Number region.
  3. Saves image data information stored in the Accession Number region into the Accession Number region after it has been subjected to information composite processing.

● Information split processing

❍ Processing for when outputting image data via FINP, FNIP and E-i/f

- Patient ID
  1. According to the FieldTool setup, extracts image data information stored in the Patient ID region after it has been subjected to information composite processing.
  2. Stores image data information in the Patient ID region and Requesting Service region for data output. When image data is stored, specified pad character come in the empty region of the Patient ID region for image data output.
- Accession Number
  1. According to the FieldTool setup, extracts image data information stored in the Accession Number region and saves it in the Accession Number region.
  2. According to the FieldTool setup, extracts image data information stored in the Requesting Service region and saves it in the Accession Number region.
  3. Saves image data information stored in the Accession Number region into the Accession Number region after it has been subjected to information composite processing.

❍ Processing for when outputting image data via DICOM

Outputs image data information via the DICOM protocol.

The configuration management setup procedure is described below.

(1) Select “Shut Down” from the “Start” menu.

The “Shut Down” screen will appear.

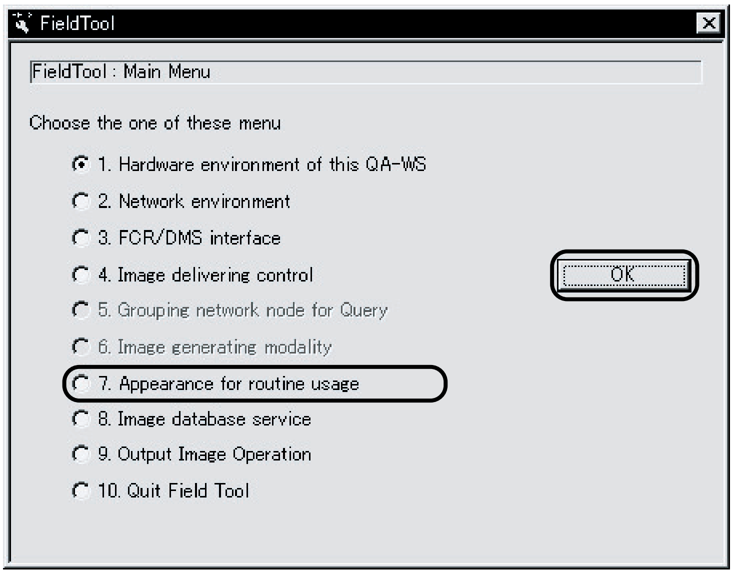
(2) Select “Restart the Computer” and click [Yes].

The controller main unit will restart.

(3) To display the FieldTool Main Menu, hold down the <SHIFT> key when “Start” appears on the bottom of the screen.

➔ The FieldTool Main Menu will appear.

(4) Select “7.Appearance for routine usage” and click [OK].


FieldTool

FieldTool : Main Menu

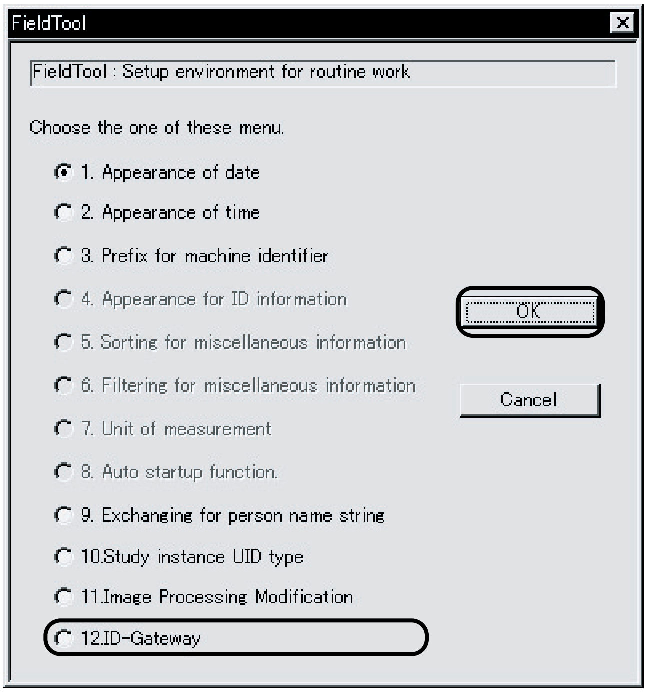
Choose the one of these menu

- ● 1. Hardware environment of this QA-WS
- ○ 2. Network environment
- ○ 3. FCR/DMS interface
- ○ 4. Image delivering control
- ○ 5. Grouping network node for Query
- ○ 6. Image generating modality
- ○ 7. Appearance for routine usage
- ○ 8. Image database service
- ○ 9. Output Image Operation
- ○ 10. Quit Field Tool

FR5H0024.EPS

➔ The “FieldTool : Setup environment for routine work” screen will appear.

(5) Select “12.ID-Gateway” and click [OK].


FieldTool

FieldTool : Setup environment for routine work

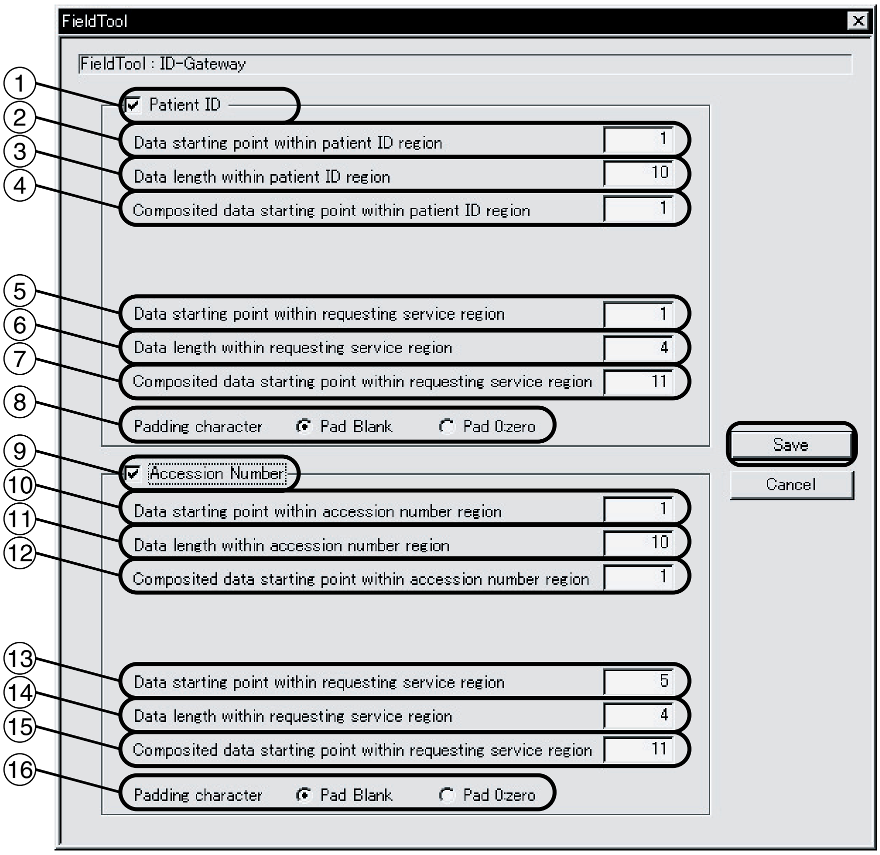
Choose the one of these menu.

- ● 1. Appearance of date
- ○ 2. Appearance of time
- ○ 3. Prefix for machine identifier
- ○ 4. Appearance for ID information
- ○ 5. Sorting for miscellaneous information
- ○ 6. Filtering for miscellaneous information
- ○ 7. Unit of measurement
- ○ 8. Auto startup function.
- ○ 9. Exchanging for person name string
- ○ 10.Study instance UID type
- ○ 11.Image Processing Modification
- ○ 12.ID-Gateway

FR5H0025.EPS

➔ The “FieldTool : ID-Gateway” screen will appear.

(6) Perform configuration management setups.


FieldTool

FieldTool : ID-Gateway

① ☑ Patient ID

② Data starting point within patient ID region: 1

③ Data length within patient ID region: 10

④ Composited data starting point within patient ID region: 1

⑤ Data starting point within requesting service region: 1

⑥ Data length within requesting service region: 4

⑦ Composited data starting point within requesting service region: 11

⑧ Padding character ● Pad Blank ○ Pad 0:zero

⑨ ☑ Accession Number

⑩ Data starting point within accession number region: 1

⑪ Data length within accession number region: 10

⑫ Composited data starting point within accession number region: 1

⑬ Data starting point within requesting service region: 5

⑭ Data length within requesting service region: 4

⑮ Composited data starting point within requesting service region: 11

⑯ Padding character ● Pad Blank ○ Pad 0:zero

FR5H0026.EPS

● Patient ID no.

	Item	Initial value	Setting values
①	Flag to be checked when Patient ID composite function is used.	Not checked.	Checked when this flag is used.
②	Data starting point within Patient ID region	1	1~10
③	Data length within Patient ID region	10	1~10
④	Composited data starting point within Patient ID region	1	1~9
⑤	Data starting point within Requesting Service region	1	1~8
⑥	Data length within Requesting Service region	4	1~8
⑦	Composited data starting point within Requesting Service region	11	1~11
⑧	Padding character	Space	Space or 0

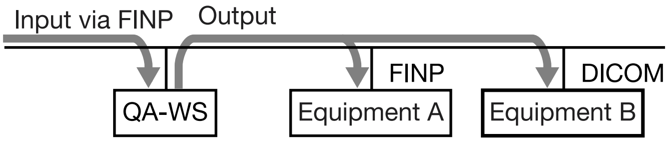
TR5H0002.EPS

● Study no.

	Item	Initial value	Setting values
⑨	Flag to be checked when Accession Number composite function is used.	Not checked.	Checked when this flag is used.
⑩	Data starting point within Accession Number region	1	1~10
⑪	Data length within Accession Number region	10	1~10
⑫	Composited data starting point within Accession Number region	1	1~9
⑬	Data starting point within Requesting Service region	5	1~8
⑭	Data length within Requesting Service region	4	1~8
⑮	Composited data starting point within Requesting Service region	11	1~11
⑯	Padding character	Space	Space or 0

TR5H0003.EPS

Described below is a setup example of a Patient ID in the following network connection.



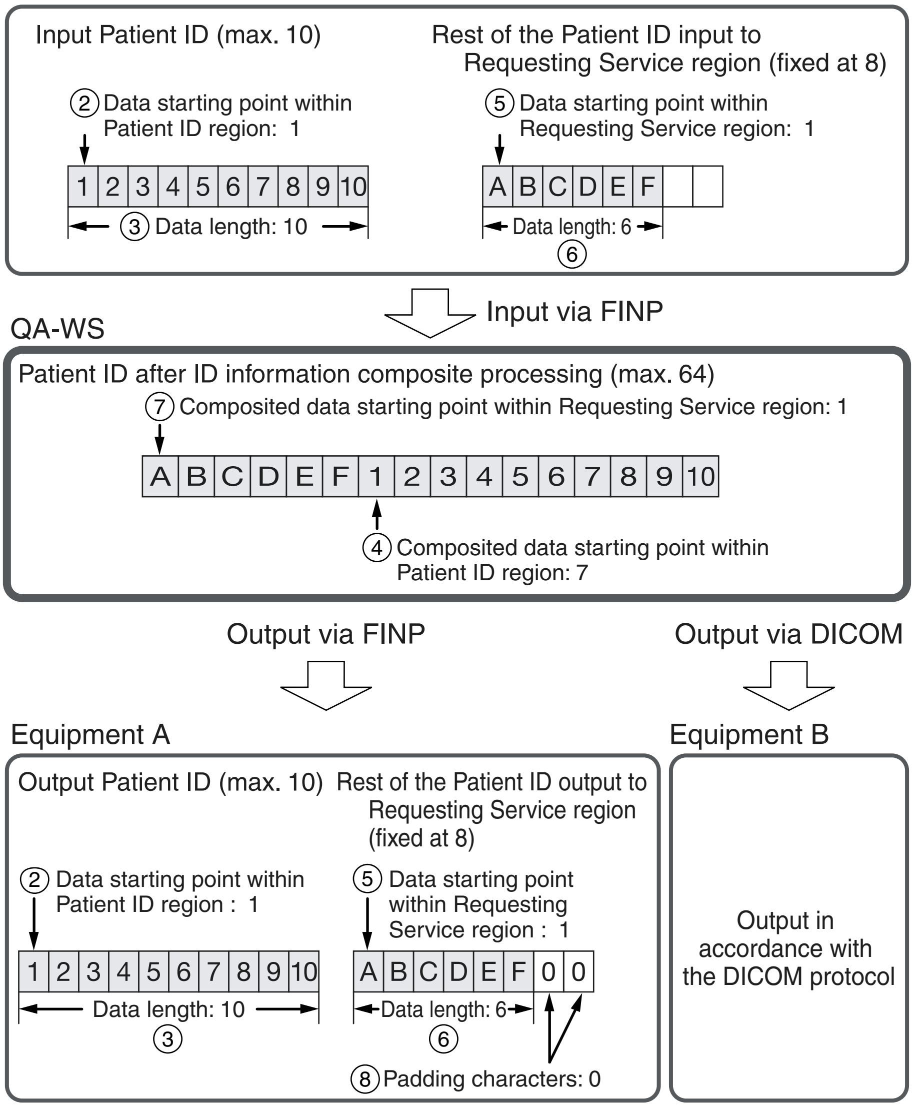
FR5H0035.EPS

	Item	Setting values (example)
①	Flag to be checked when Patient ID composite function is used.	Used
②	Data starting point within Patient ID region	1
③	Data length within Patient ID region	10
④	Composited data starting point within Patient ID region	7
⑤	Data starting point within Requesting Service region	1
⑥	Data length within Requesting Service region	6
⑦	Composited data starting point within Requesting Service region	1
⑧	Padding character	0

TR5H0004.EPS

This is an example when the Requesting Service information comes in the 1st to 6th characters of the Patient ID after it has been subjected to ID data composite processing.
In this example, the remaining two characters of the Requesting Service region can be used for the Accession Number.

The Accession Number is not described herein because it is the same as for the Patient ID.


Input Patient ID (max. 10)
Rest of the Patient ID input to Requesting Service region (fixed at 8)
② Data starting point within Patient ID region: 1
⑤ Data starting point within Requesting Service region: 1
1 2 3 4 5 6 7 8 9 10
A B C D E F
③ Data length: 10
Data length: 6 ⑥
Input via FINP
QA-WS
Patient ID after ID information composite processing (max. 64)
⑦ Composited data starting point within Requesting Service region: 1
A B C D E F 1 2 3 4 5 6 7 8 9 10
④ Composited data starting point within Patient ID region: 7
Output via FINP
Output via DICOM
Equipment A
Equipment B
Output Patient ID (max. 10)
Rest of the Patient ID output to Requesting Service region (fixed at 8)
② Data starting point within Patient ID region : 1
⑤ Data starting point within Requesting Service region : 1
1 2 3 4 5 6 7 8 9 10
A B C D E F 0 0
Data length: 10 ③
Data length: 6 ⑥
⑧ Padding characters: 0
Output in accordance with the DICOM protocol

FR5H0034.EPS

(7) Click [Save].

➔ You are returned to the “FieldTool : Setup environment for routine work” screen.

(8) Click [Cancel].

➔ You are returned to the Field Tool Main Menu.

(9) Select “10.Quit Field Tool” and click [OK].

➔ The Field Tool Main Menu will quit.

2.3 Expansion of the FUJI Network Protocol (FINP)

Expansion of the FINP will enable the following data items handled via DICOM to be handled as variable-length data.

- Patient name
- Patient ID
- Accession Number
- Requesting Service
- Department name in kanji
- Menu name in alphabet
- Menu name in kanji

● Differentiation between the FINP and the E-FINP

The FINP for up to version A01 and the expanded FINP (E-FINP: Enhanced FINP) are differentiated with each other according to the protocol no. as follows.

- FINP: 0100
- E-FINP: 0110

Using the FieldTool function, the protocol to be used (FINP or E-FINP) can be specified for each destination.

● FINP and E-FINP data length

The table below shows the FINP and E-FINP data length for data transmission purposes..

Item	FINP	E-FINP
Patient name	20 max.	64 max.
Patient ID	10 max.	64 max.
Accession Number	20 max.	64 max.
Requesting Service	Fixed at 8.	64 max.
Dept. name in kanji	Fixed at 4.	64 max.
Menu name in alphabet	Fixed at 20.	64 max.
Menu name in kanji	Fixed at 16.	64 max.

TR5H0001.EPS

Spaces will be added if fixed-length information is not sufficient for the specified no. of digits.

2.4 Diversification of the SERIES Instance UID Issue Logic

Diversified SERIES Instance UID issue logic will secure consistency of image handling even in the environment where machines of other makers' are used mixed.

● Using the SERIES Instance UID specified by the IDT

If the SERIES Instance UID issued by the IDT is used as it is, images included in the study menu determined by the IDT can be handled as those belonging to the same SERIES.

● Issuing the SERIES Instance UID according to the exposure menu code (MPM code) relevant to each image

The SERIES Instance UID thus issued will make it possible to handle images exposed using the same exposure menu as those belonging to the same SERIES.

● Copying the STUDY Instance UID to the SERIES Instance UID

If the STUDY Instance UID is used as the SERIES Instance UID, images included in the same study can be handled as those belonging to the same SERIES.

2.5 Image Shadow-Masking Function (Optional)

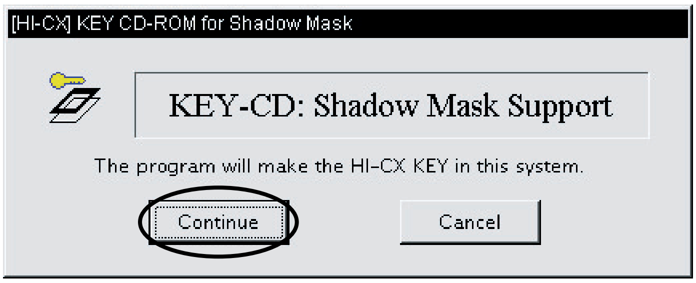
Shadow-masking (blackening) the unnecessary area (outside the irradiation field) on the exposed image will make image viewing easier.
Described herein are procedures for using this function. Install the option key first and then the AP key.

❍ Have the following ready for use.

- Shadow-masking function option key CD-ROM ("Shadow-CD" hereinafter)
- AP key registry CD-ROM ("AP Key CD" hereinafter)

(1) Insert the Shadow-CD into the CD-ROM drive.
➔ The "KEY CD-ROM for Shadow Mask" screen will appear.

(2) Click [Continue].



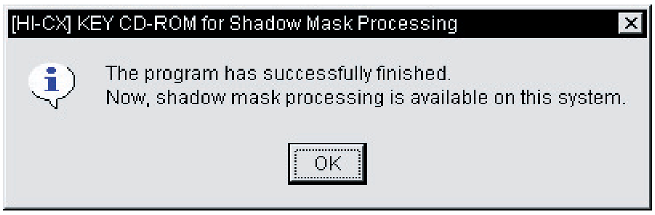
[HI-CX] KEY CD-ROM for Shadow Mask

KEY-CD: Shadow Mask Support

The program will make the HI-CX KEY in this system.

FR5H0020.EPS

(3) Click [OK].



[HI-CX] KEY CD-ROM for Shadow Mask Processing

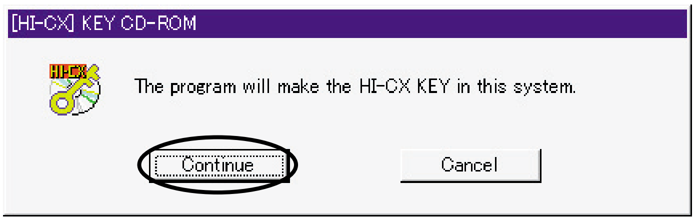
The program has successfully finished.
Now, shadow mask processing is available on this system.

FR5H0021.EPS

(4) Remove the Shadow-CD from the CD-ROM drive.

(5) Insert the AP Key CD into the CD-ROM drive.
➔ The “KEY CD-ROM” screen will appear.

(6) Click [Continue].



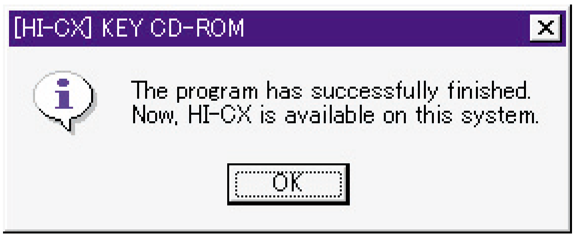
[HI-CX] KEY CD-ROM

The program will make the HI-CX KEY in this system.

FR5H0022.EPS

➔ The “KEY CD-ROM” screen will appear.

(7) Click [OK].



[HI-CX] KEY CD-ROM

The program has successfully finished.
Now, HI-CX is available on this system.

FR5H0023.EPS

(8) Remove the AP Key CD from the CD-ROM drive.
☞ For the specific setup procedure, see “Setting Up the Equipment Used for Transferring Processed Images”.

2.6 Image Synthesis Processing Function (Optional)

For the purposes of determination of scoliosis or observation of whole lower extremities, this function makes it possible to synthesize and/or join a multiple number of images of the same size into one image.
Described herein are procedures for using the image synthesis processing function. Install the option key first and then the AP key.

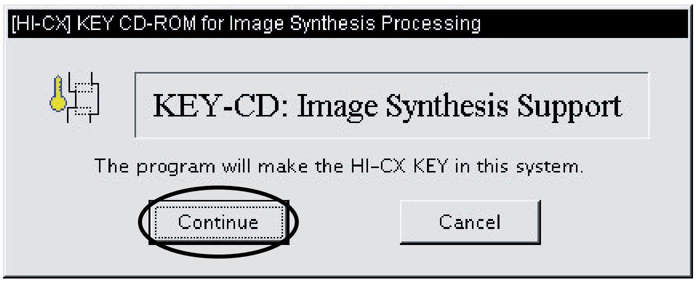
❍ Have the following ready for use.

- Image synthesis processing function option key CD-ROM ("Synthesis-CD" hereinafter)
- AP key registry CD-ROM ("AP Key CD" hereinafter)

(1) Insert the Synthesis-CD into the CD-ROM drive.

➔ The "KEY CD-ROM for Image Synthesis Processing" screen will appear.

(2) Click [Continue].



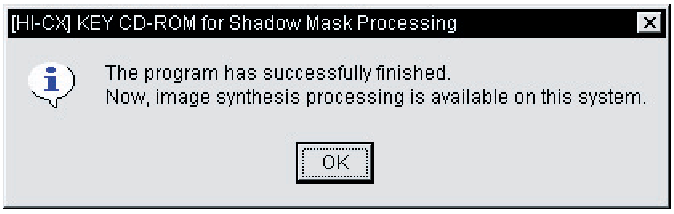
[HI-CX] KEY CD-ROM for Image Synthesis Processing

KEY-CD: Image Synthesis Support

The program will make the HI-CX KEY in this system.

FR5H0027.EPS

(3) Click [OK].



[HI-CX] KEY CD-ROM for Shadow Mask Processing

The program has successfully finished.
Now, image synthesis processing is available on this system.

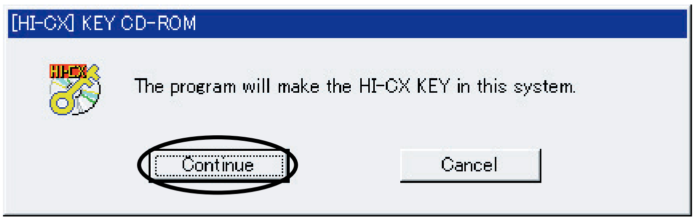
FR5H0028.EPS

(4) Remove the Synthesis-CD from the CD-ROM drive.

(5) Insert the AP Key CD into the CD-ROM drive.

➔ The "KEY CD-ROM" screen will appear.

(6) Click [Continue].



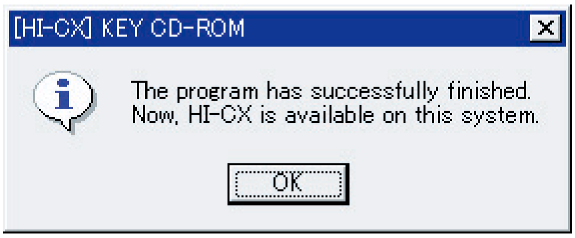
[HI-CX] KEY CD-ROM

The program will make the HI-CX KEY in this system.

FR5H0029.EPS

➔ The "KEY CD-ROM" screen will appear.

(7) Click [OK].



[HI-CX] KEY CD-ROM

The program has successfully finished.
Now, HI-CX is available on this system.

FR5H0030.EPS

(8) Remove the AP Key CD from the CD-ROM drive.

2.7 Processed Image Output Function (Optional)

This function processes read raw data into JPEG data.

Described herein are procedures for using the processed image output function. Install the option key first and then the AP key.

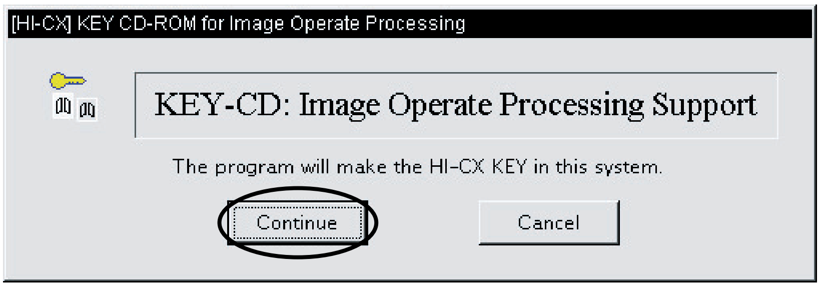
❍ Have the following ready for use.

- Processed image output function option key CD-ROM (“Ope-Pro-CD” hereinafter)
- AP key registry CD-ROM (“AP Key CD” hereinafter)

(1) Insert the Ope-Pro-CD into the CD-ROM drive.

➔ The “KEY CD-ROM for Image Operate Processing” screen will appear.

(2) Click [Continue].



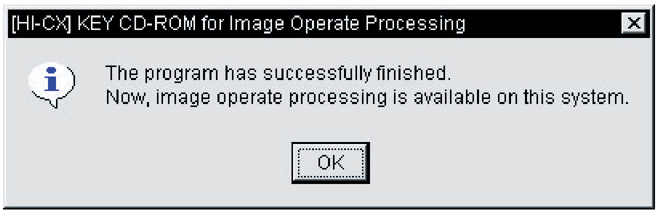
[HI-CX] KEY CD-ROM for Image Operate Processing

KEY-CD: Image Operate Processing Support

The program will make the HI-CX KEY in this system.

FR5H0032.EPS

(3) Click [OK].



[HI-CX] KEY CD-ROM for Image Operate Processing

The program has successfully finished.
Now, image operate processing is available on this system.

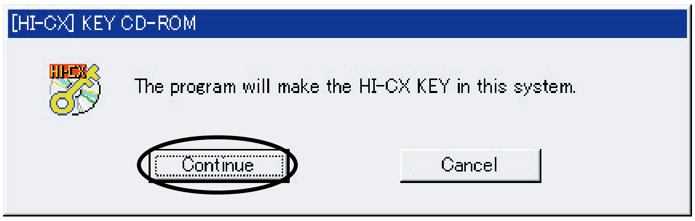
FR5H0033.EPS

(4) Remove the Ope-Pro-CD from the CD-ROM drive.

(5) Insert the AP Key CD into the CD-ROM drive.

➔ The “KEY CD-ROM” screen will appear.

(6) Click [Continue].



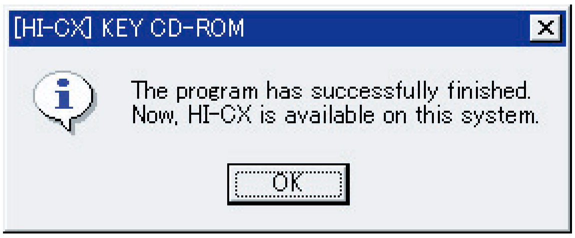
[HI-CX] KEY CD-ROM

The program will make the HI-CX KEY in this system.

FR5H0029.EPS

➔ The “KEY CD-ROM” screen will appear.

(7) Click [OK].



[HI-CX] KEY CD-ROM

The program has successfully finished.
Now, HI-CX is available on this system.

FR5H0030.EPS

(8) Remove the AP Key CD from the CD-ROM drive.

Appendix 3. Upgrading Software to Version A03

3.1 Software Upgrade Procedure to Version A03

The following setups are necessary. Be sure to observe order of setups shown below.

- Software installation
- File copy
- Registry setup
- Image information file conversion
- Database restructuring
- Marker replacement

❍ Have the following ready for use.

- QA-WS version A03 software installation CD-ROM (“AP-CD” hereafter)

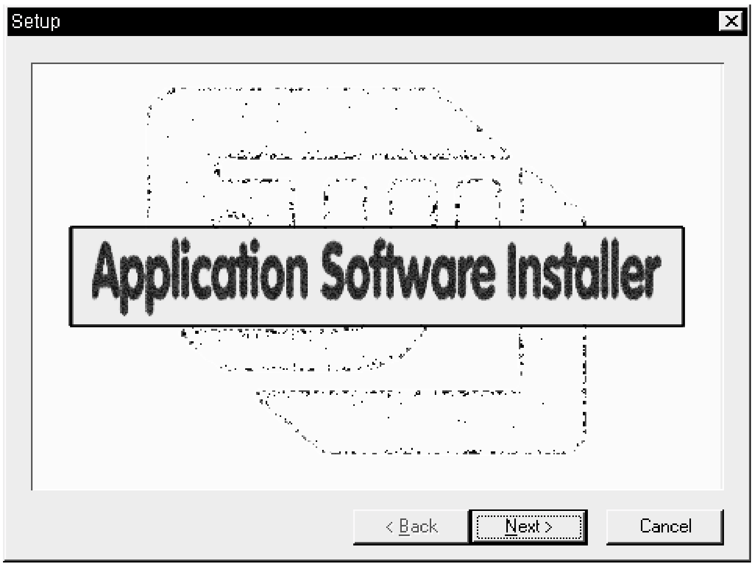
■ Software installation

Install the A03 version software as follows.

(1) Insert the AP-CD into the CD-ROM drive.

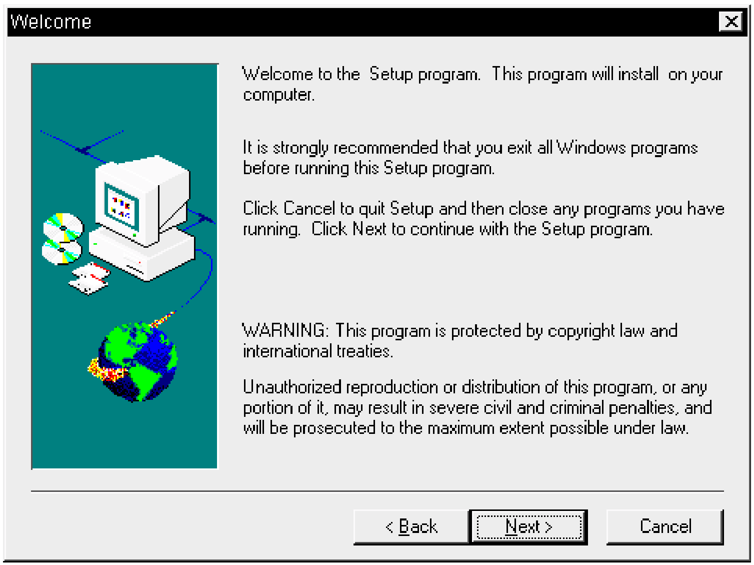
➔ After a while, the “Setup” screen appears.

(2) Click Next >.



FR5H0100.EPS

(3) Click Next >.



Welcome

Welcome to the Setup program. This program will install on your computer.

It is strongly recommended that you exit all Windows programs before running this Setup program.

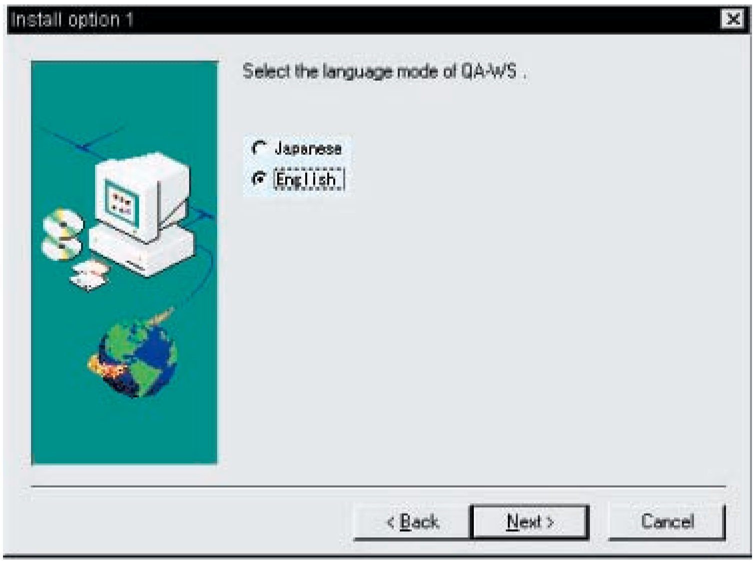
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

FR5H0101.EPS

(4) Select “Japanese” or “English” for the language to be used and click Next >.



Install option 1

Select the language mode of QA-WS .

○ Japanese
● English

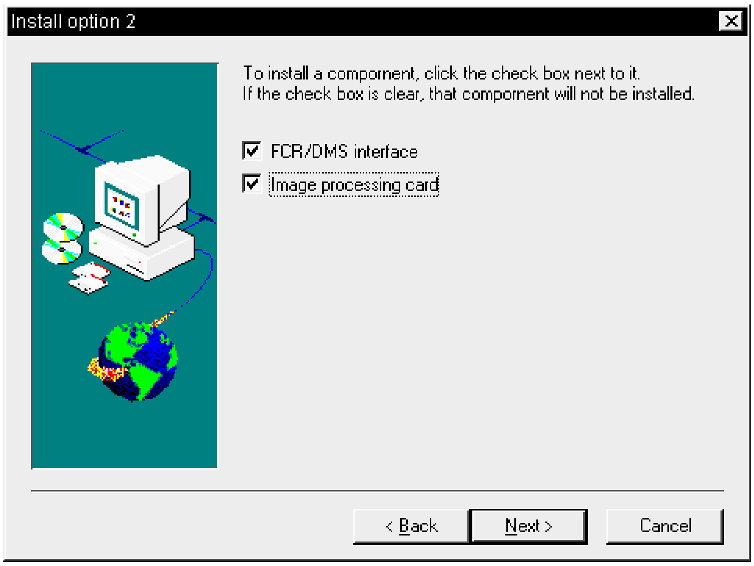
FR5H0102.EPS

(5) Check (☐ ➔ ☑) the item to be used and click Next >.

- ☐ FCR/DMS interface: When using the E-i/f.
- ☐ Image processing card: When using the image processing board.

◆ **NOTE** ◆

If image processing board has been installed on the QA-WS, be sure to check (☐ ➔ ☑) ☐ Image processing card.

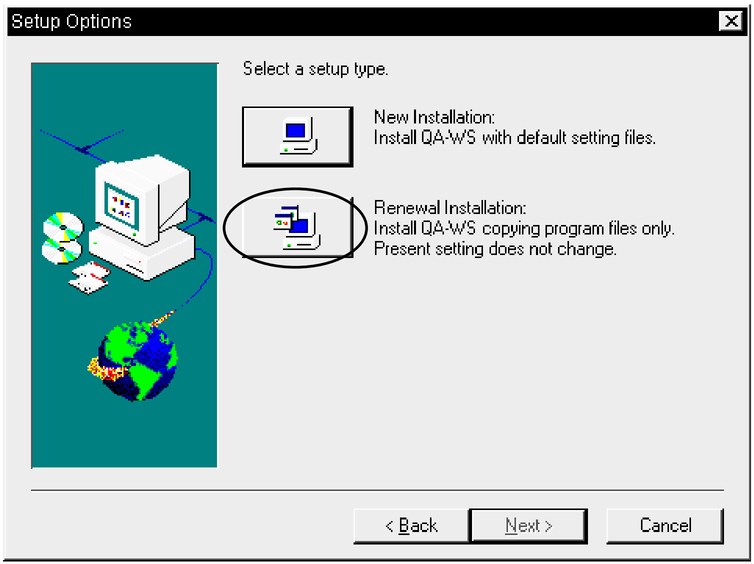

Install option 2

To install a component, click the check box next to it.
If the check box is clear, that component will not be installed.

☑ FCR/DMS interface
☑ Image processing card

FR5H0103.EPS

(6) For the installation type, click .


Setup Options

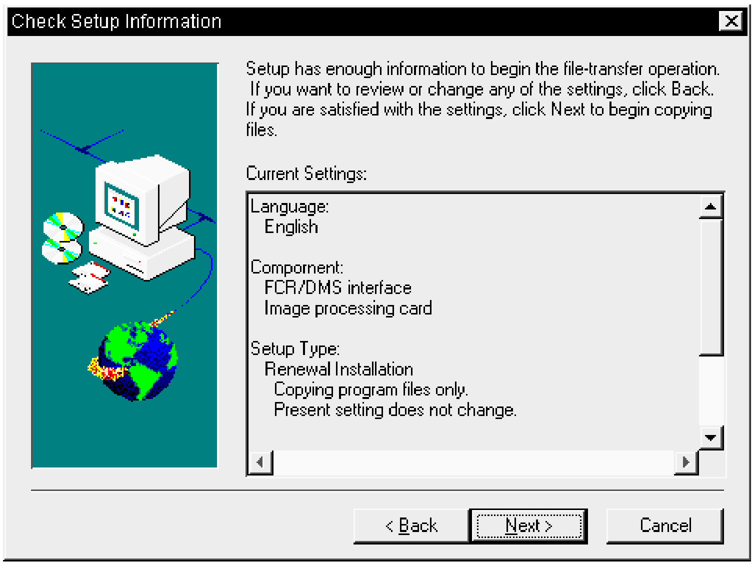
Select a setup type.

New Installation:
Install QA-WS with default setting files.

Renewal Installation:
Install QA-WS copying program files only.
Present setting does not change.

FR5H0104.EPS

(7) Make sure that the content of the “Current Settings:” is as actually has been specified and click Next >.



Setup has enough information to begin the file-transfer operation. If you want to review or change any of the settings, click Back. If you are satisfied with the settings, click Next to begin copying files.

Current Settings:

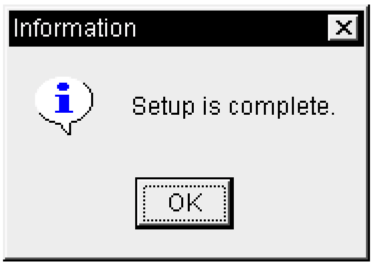
Language:
  English

Component:
  FCR/DMS interface
  Image processing card

Setup Type:
  Renewal Installation
    Copying program files only.
    Present setting does not change.

FR5H0105.EPS

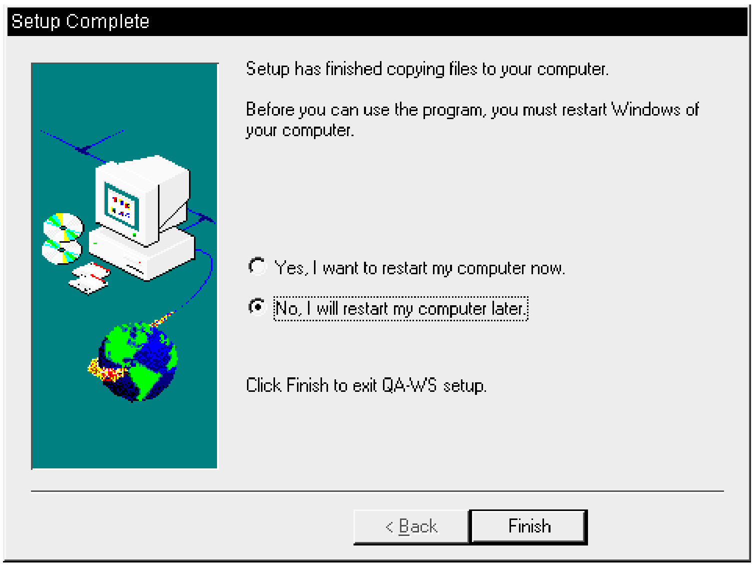
(8) Click OK.



Setup is complete.

FR5H0106.EPS

(9) Select ● No, I will restart my computer later. and click Finish.



Setup has finished copying files to your computer.

Before you can use the program, you must restart Windows of your computer.

○ Yes, I want to restart my computer now.

● No, I will restart my computer later.

Click Finish to exit QA-WS setup.

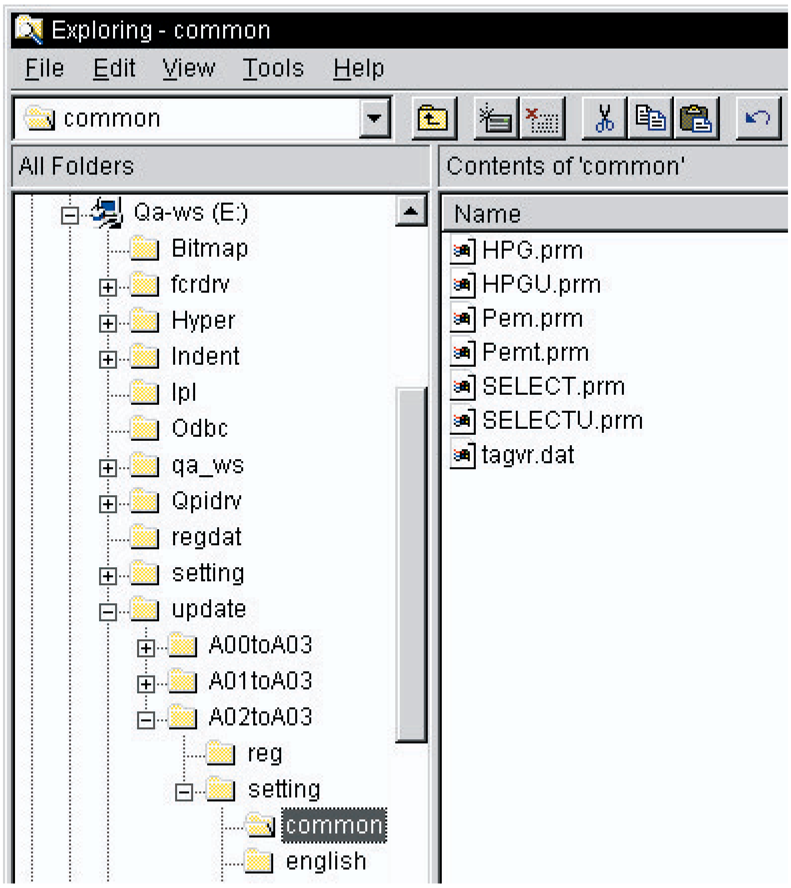
FR5H0107.EPS

■ File copy

Copy files from the AP-CD to the hard disk as necessary.

(1) Open the following folders.

- To upgrade software version from A00 to A03
  "CD-ROM drive: \updatte\A00toA03\setting\common"
- To upgrade software version from A01 to A03
  "CD-ROM drive: \updatte\A01toA03\setting\common"
- To upgrade software version from A02 to A03
  "CD-ROM drive: \updatte\A02toA03\setting\common"


Exploring - common
File
Edit
View
Tools
Help
common
All Folders
Contents of 'common'
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
update
A00toA03
A01toA03
A02toA03
reg
setting
common
english
Name
HPG.prm
HPGU.prm
Pem.prm
Pemt.prm
SELECT.prm
SELECTU.prm
tagvr.dat

FR5H0108.EPS

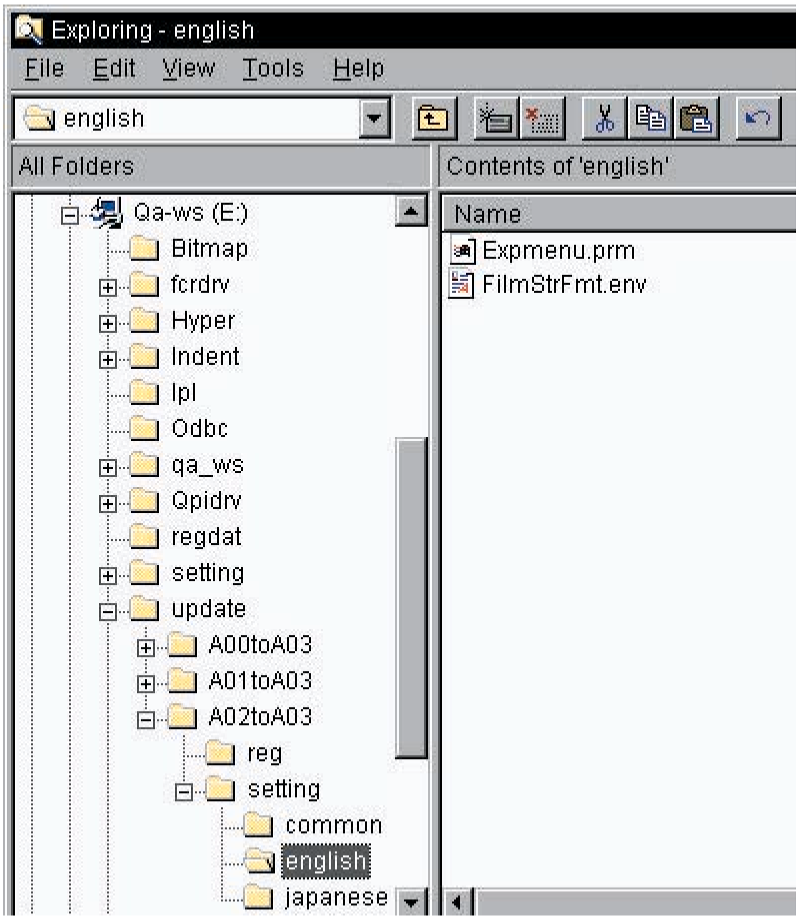
(2) Copy all the files contained in the "common" folder to "C:\Program Files\Hi-cx" folder.

(3) Open the following folders.

- To upgrade software version from A00 to A03
  "CD-ROM drive: \update\A00toA03\setting\japanese or english"
- To upgrade software version from A01 to A03
  "CD-ROM drive: \update\A01toA03\setting\japanese or english"
- To upgrade software version from A02 to A03
  "CD-ROM drive: \update\A02toA03\setting\japanese or english"

◆ NOTE ◆

For whether "japanese" or "english", be sure to select the same folder as the language that has been selected for AP installation.

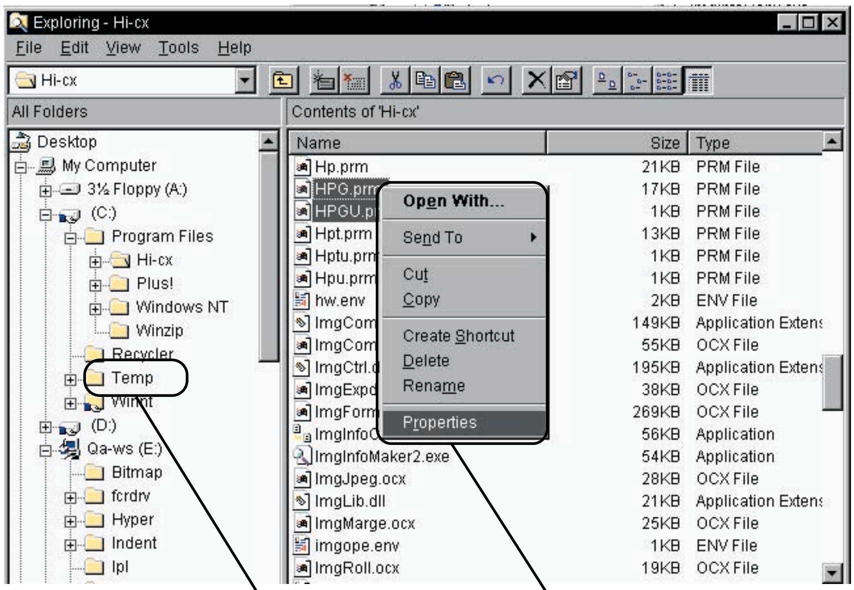

Exploring - english
File Edit View Tools Help
english
All Folders
Contents of 'english'
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
update
A00toA03
A01toA03
A02toA03
reg
setting
common
english
japanese
Name
Expmenu.prm
FilmStrFmt.env

FR5H0109.EPS

(4) Copy all the files contained in the "japanese" or "english" folder to "C:\Program Files\Hi-cx" folder.

(5) From the "C:\Program Files\Hi-cx" folder, select all the files copied in steps (2) and (4) above.

(6) Right-click the mouse to select Properties dialog box from the menu.


Exploring - Hi-cx
File Edit View Tools Help
Hi-cx
All Folders
Contents of 'Hi-cx'
Desktop
My Computer
3½ Floppy (A:)
(C:)
Program Files
Hi-cx
Plus!
Windows NT
Winzip
Recycler
Temp
Winnt
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Open With...
Send To
Cut
Copy
Create Shortcut
Delete
Rename
Properties

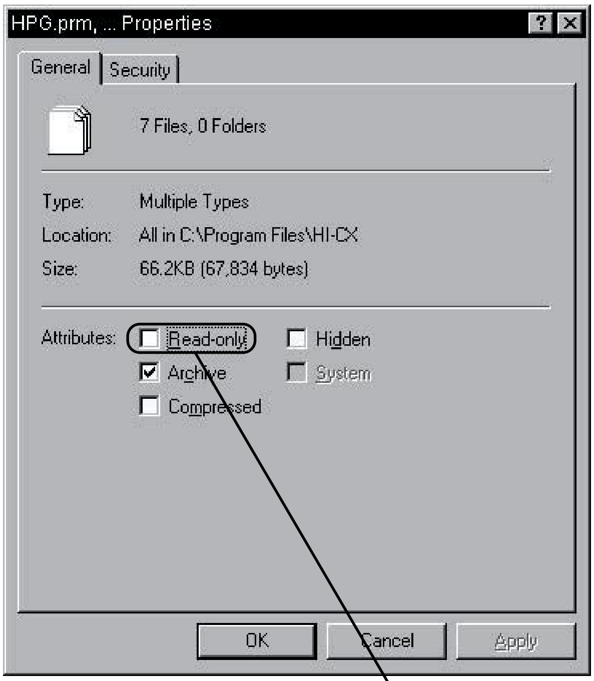
Name	Size	Type
Hp.prm	21KB	PRM File
HPG.prm	17KB	PRM File
HPGU.p	1KB	PRM File
Hpt.prm	13KB	PRM File
Hptu.prm	1KB	PRM File
Hpu.prm	1KB	PRM File
hw.env	2KB	ENV File
ImgCom	149KB	Application Extens
ImgCom	55KB	OCX File
ImgCtrl.d	195KB	Application Extens
ImgExpo	38KB	OCX File
ImgForm	269KB	OCX File
ImgInfoC	56KB	Application
ImgInfoMaker2.exe	54KB	Application
ImgJpeg.ocx	28KB	OCX File
ImgLib.dll	21KB	Application Extens
ImgMarge.ocx	25KB	OCX File
imgope.env	1KB	ENV File
ImgRoll.ocx	19KB	OCX File

Menu

Folder selected for AP installation

FR5H0110.EPS

(7) Deselect (☑ ➔ ☐) the ☐ Read-only property dialog box and click OK.


HPG.prm, ... Properties
General
Security
OK
Cancel
Apply

7 Files, 0 Folders

Type: Multiple Types

Location: All in C:\Program Files\HI-CX

Size: 66.2KB (67,834 bytes)

Attributes: ☐ Read-only ☐ Hidden

☑ Archive ☐ System

☐ Compressed

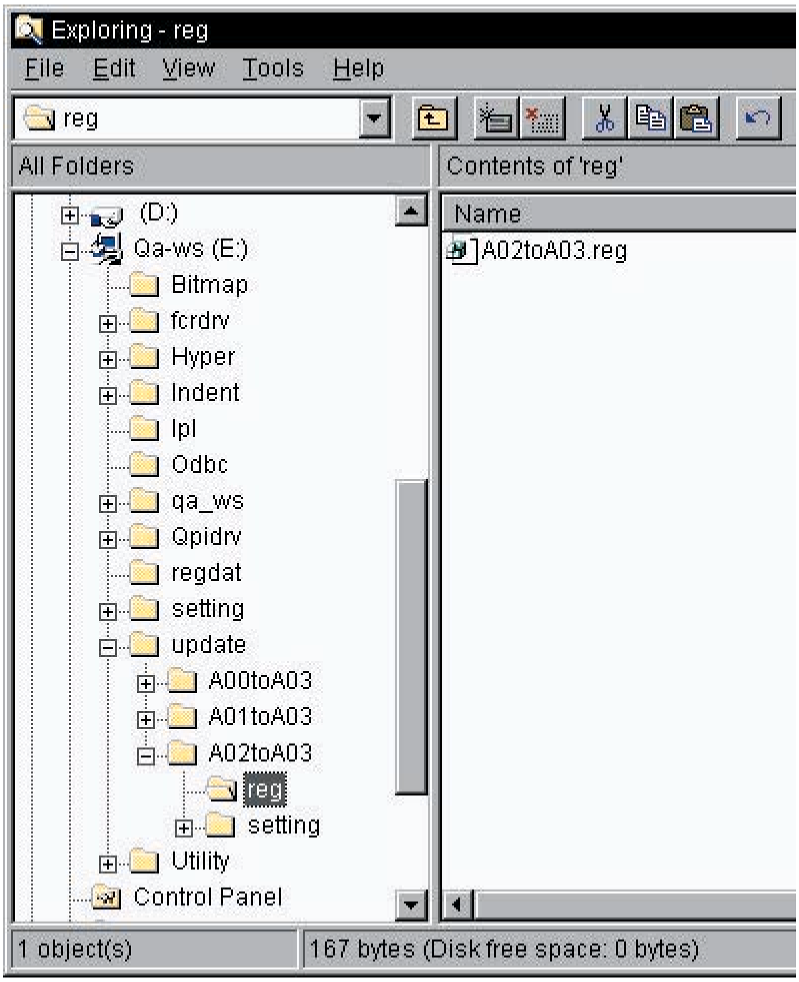
For read only

FR5H0111.EPS

■ Registry setup

(1) Open the following folders.

- To upgrade software version from A00 to A03
  "CD-ROM drive\update\A00toA03\reg"
- To upgrade software version from A01 to A03
  "CD-ROM drive\update\A01toA03\reg"
- To upgrade software version from A02 to A03
  "CD-ROM drive\update\A02toA03\reg"


Exploring - reg
File
Edit
View
Tools
Help
reg
All Folders
Contents of 'reg'
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
update
A00toA03
A01toA03
A02toA03
reg
setting
Utility
Control Panel
Name
A02toA03.reg

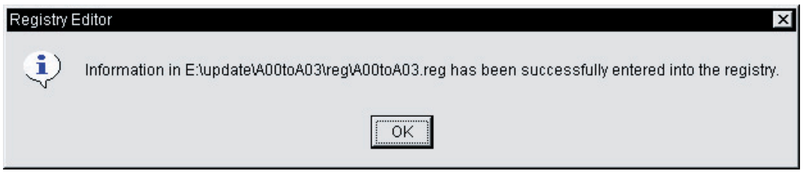
1 object(s)

167 bytes (Disk free space: 0 bytes)

FR5H0112.EPS

(2) Double-click the registry file contained in the "reg" folder.
➔ A window opens to indicate the completion of registry setup.

(3) Click OK.


Registry Editor
OK

Information in E:\update\A00toA03\reg\A00toA03.reg has been successfully entered into the registry.

FR5H0113.EPS

■ Image information file conversion

File conversion is necessary because the content of the image information file differs from that of the previous software version.

(1) Open the “C:\Program Files\Hi-cx” folder.

(2) Double-click ImgInfoConv.
➔ The converter starts up.

(3) Click Convert.
➔ The screen that indicates the completion of conversion appears.

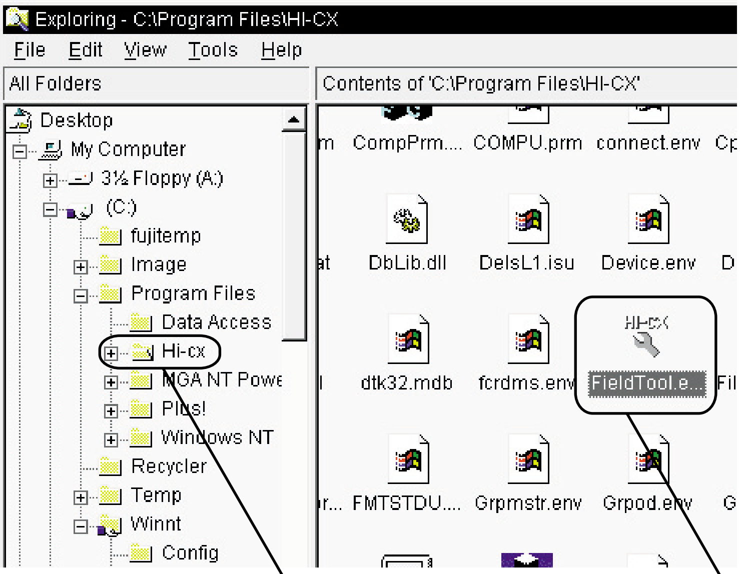
(4) Click OK.

■ Database restructuring

When the AP version has been upgraded, the database should be restructured.

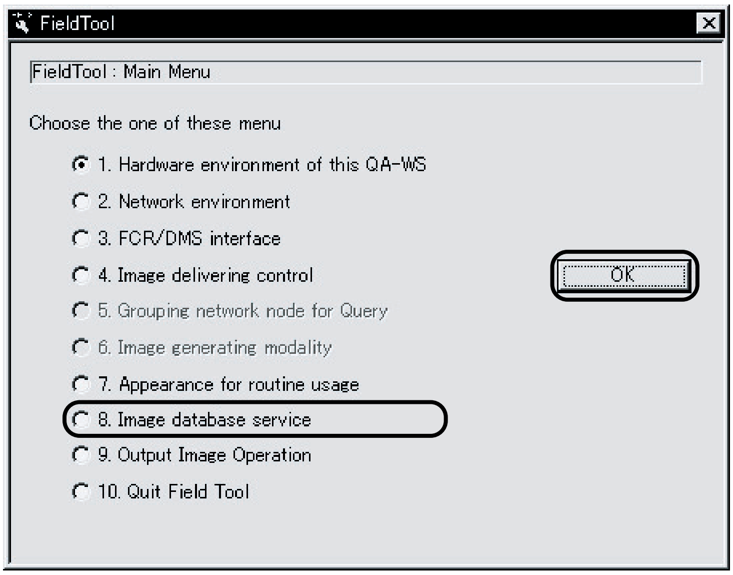
(1) Open the “C:\Program Files\Hi-cx” folder.

(2) Double-click the FieldTool.e... file.


Exploring - C:\Program Files\HI-CX
File Edit View Tools Help
All Folders
Contents of 'C:\Program Files\HI-CX'
Desktop
My Computer
3½ Floppy (A:)
(C:)
fujitemp
Image
Program Files
Data Access
Hi-cx
MGA NT Powe
Plus!
Windows NT
Recycler
Temp
Winnt
Config
CompPrm....
COMPU.prm
connect.env
DbLib.dll
DelsL1.isu
Device.env
dtk32.mdb
fcrdms.env
FieldTool.e...
FMTSTDU....
Grpmstr.env
Grpod.env
Hi-cx folder
FieldTool.exe file

FR5H0114.EPS

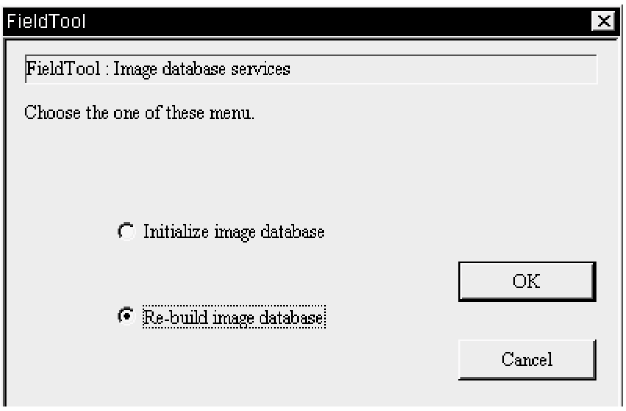
(3) Select ○ 8. Image database service and click OK.


FieldTool
FieldTool : Main Menu
● 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
○ 8. Image database service
○ 9. Output Image Operation
○ 10. Quit Field Tool
OK

Choose the one of these menu

FR5H0131.EPS

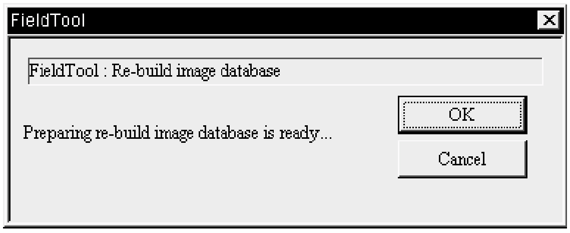
(4) Select ● Re-build image database and click OK.


FieldTool
FieldTool : Image database services
○ Initialize image database
● Re-build image database
OK
Cancel

Choose the one of these menu.

FR5H0116.EPS

(5) Click OK.

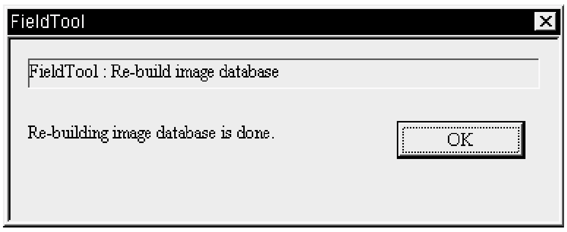

FieldTool
FieldTool : Re-build image database
OK
Cancel

Preparing re-build image database is ready...

FR5H0118.EPS

➔ Database will be restructured.

(6) Click OK.


FieldTool
FieldTool : Re-build image database
OK

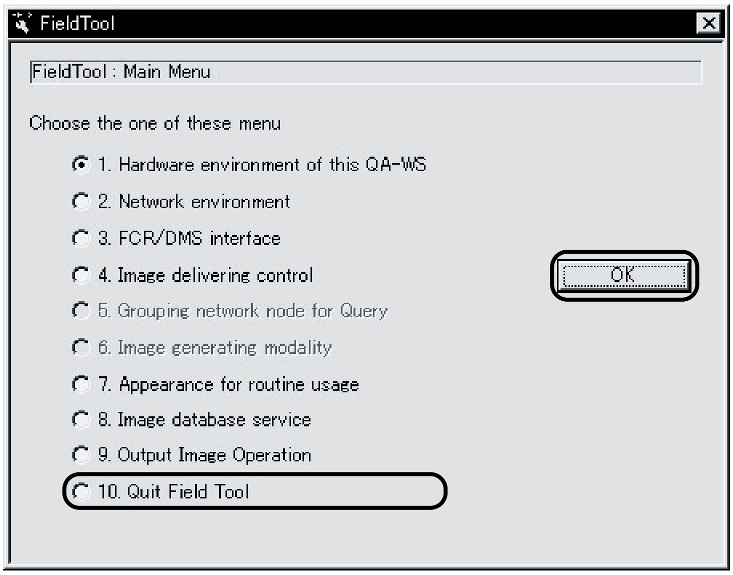
Re-building image database is done.

FR5H0117.EPS

(7) Click Cancel several times.

➔ The system returns to the FieldTool main menu.

(8) Select ○ 10. Quit Field Tool and click OK.



FieldTool

FieldTool : Main Menu

Choose the one of these menu

- ● 1. Hardware environment of this QA-WS
- ○ 2. Network environment
- ○ 3. FCR/DMS interface
- ○ 4. Image delivering control
- ○ 5. Grouping network node for Query
- ○ 6. Image generating modality
- ○ 7. Appearance for routine usage
- ○ 8. Image database service
- ○ 9. Output Image Operation
- ○ 10. Quit Field Tool

FR5H0115.EPS

➔ The FieldTool main menu will quit.

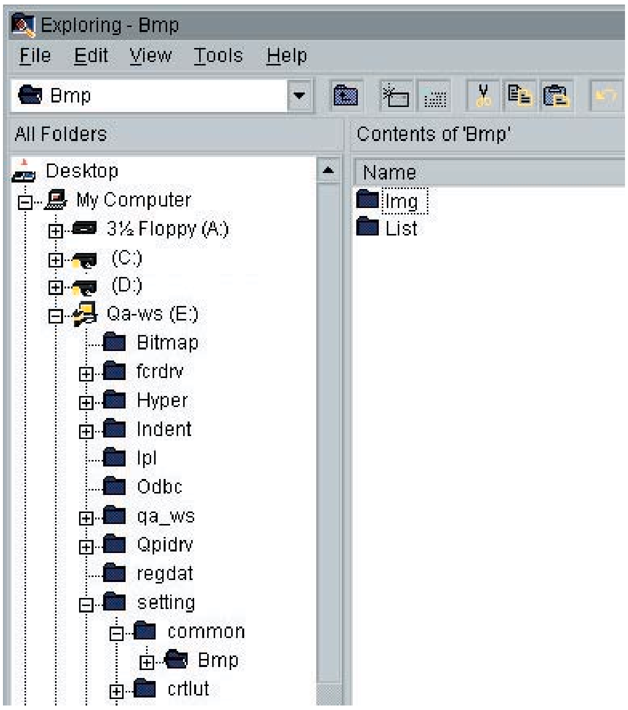
■ Marker replacement

Some new markers have been added for the new software version. Because registration sizes of the new markers are different from those of previous versions, the old markers cannot be used.
Replace therefore the markers as follows.

(1) Open the “C:\Program Files\Hi-cx\BMP” folder.

(2) Delete all folders from the “BMP” folder.

(3) Open the “CD-ROM drive:\setting\common\BMP” folder.


Exploring - Bmp
File Edit View Tools Help
Bmp
All Folders
Contents of 'Bmp'
Desktop
My Computer
3½ Floppy (A:)
(C:)
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
common
Bmp
crtlut
Name
Img
List

(4) Copy all folders contained in the “BMP” folder of the CD-ROM drive onto “C:\Program Files\Hi-cx\BMP”.

(5) From the “C:\Program Files\Hi-cx\BMP” folder, select all folders copied in step (4) above and files contained in those folders.

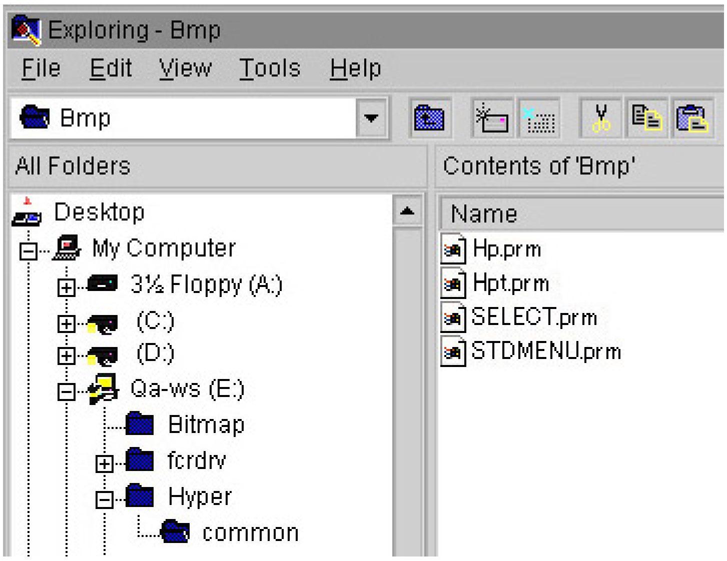
(6) Right-click the mouse to select Properties from the menu.
➔ The properties dialog box appears.

(7) Deselect (☑ ➔ ☐) ☐ Read-only of the properties dialog box and click OK.

3.2 Settings Necessary for Using the MFP

To enable settings necessary for using the MFP, copy required setup files from the AP-CD onto the hard disk. Procedure to be observed follows.

(1) Open the “CD-ROM drive:\Hyper\common” folder.


Exploring - Bmp
File
Edit
View
Tools
Help
Bmp
All Folders
Contents of 'Bmp'
Desktop
My Computer
3½ Floppy (A:)
(C:)
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
common
Name
Hp.prm
Hpt.prm
SELECT.prm
STDMENU.prm

FR5H0137.EPS

(2) Copy all files contained in the “common” folder onto the “C:\Program Files\Hi-cx” folder.
➔ A dialog appears prompting you to confirm if you wish to update the files.

(3) Click OK (update).

(4) From the “C:\Program Files\Hi-cx” folder, select all files copied in step (2) above.

(5) Right-click the mouse to select Properties from the menu.
➔ The properties dialog box appears.

(6) Deselect (☑ ➔ ☐) ☐ Read-only of the properties dialog box and click OK.

Now start settings necessary for using the FieldTool MFP.

☞ “■ Settings of Details of Image Transmission/Reception with Other Connected Hosts” in “5.3.1 Settings on QA-WS”

3.3 Settings for Print Processing When Acquiring DICOM Print Printer Status

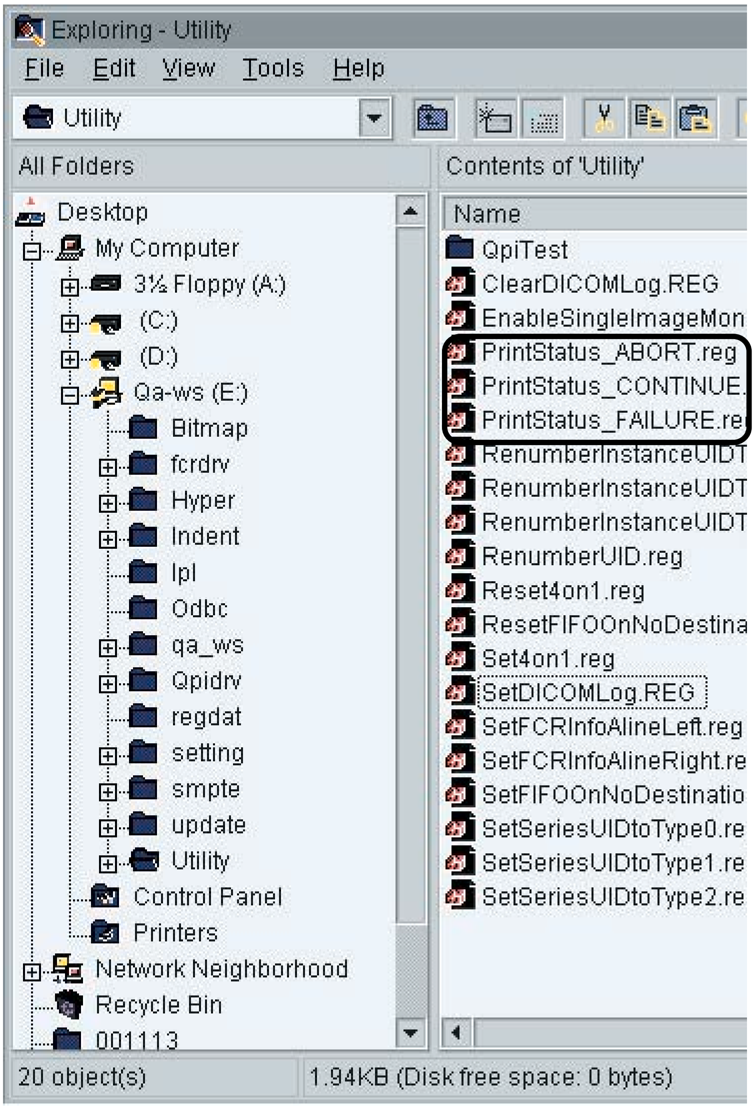
While images are printed using the DICOM Print function, a symptom in which the printer status cannot be acquired or the printer status acquired is not normal can be detected. When such a symptom is detected, the QA-WS displays the relevant dialog and continues or suspends print processing as specified by the registry. To change settings for continuing or suspending the print processing, values of the relative registry should be changed. The table below shows the relationship between among registry values, status and registry files

Value	Status level WARNING	Status level FAILURE	Acquisition of status impossible	Registry file
0	Print continued.	Print continued.	Print suspended.	\Utility\PrintStatus_CONTINUE.reg
1	Print continued.	Print suspended.	Print suspended.	\Utility\PrintStatus_FAILURE.reg
2	Print suspended.	Print suspended.	Print suspended.	\Utility\PrintStatus_ABORT.reg

TR5H0005.EPS

Described below is the registry setting procedure.

(1) Open the “CD-ROM drive:\Utility” folder.


Exploring - Utility
File Edit View Tools Help
Utility
All Folders
Contents of 'Utility'
Desktop
My Computer
3½ Floppy (A:)
(C:)
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
smpte
update
Utility
Control Panel
Printers
Network Neighborhood
Recycle Bin
001113
Name
QpiTest
ClearDICOMLog.REG
EnableSingleImageMon
PrintStatus_ABORT.reg
PrintStatus_CONTINUE.
PrintStatus_FAILURE.re
RenumberInstanceUIDT
RenumberInstanceUIDT
RenumberInstanceUIDT
RenumberUID.reg
Reset4on1.reg
ResetFIFOOnNoDestina
Set4on1.reg
SetDICOMLog.REG
SetFCRInfoAlineLeft.reg
SetFCRInfoAlineRight.re
SetFIFOOnNoDestinatio
SetSeriesUIDtoType0.re
SetSeriesUIDtoType1.re
SetSeriesUIDtoType2.re
20 object(s)
1.94KB (Disk free space: 0 bytes)

FR5H0138.EPS

(2) Double-click any of the registry files listed below that are contained in the “Utility” folder.

- PrintStatus_CONTINUE.reg
- PrintStatus_FAILURE.reg
- PrintStatus_ABORT.reg

➔ A window opens to show the completion of registry settings.

(3) Click OK.

3.4 Settings for Adding/Changing Exposure Menus and MPM Codes

When exposure menus or MPM codes have been added or changed using the IDT, data thus added or changed must be captured and reflected on the QA-WS.
Furthermore, when image processing parameters have been changed on the Image Reader according to additions or changes made using the IDT, such data additions or changes must also be captured and reflected on the QA-WS.

■ Capturing and reflecting exposure menus and MPM codes

IDT-4 menu database (hereinafter referred to as “menu DB”) is converted from the IDT-4 format to the QA-WS format and then captured to the QA-WS.

◆ REFERENCE ◆

Because menu DB of the IDT-3 format cannot be converted to that of the QA-WS format, convert it from the IDT-3 format to the IDT-4 format ahead of time using the IDT tool.

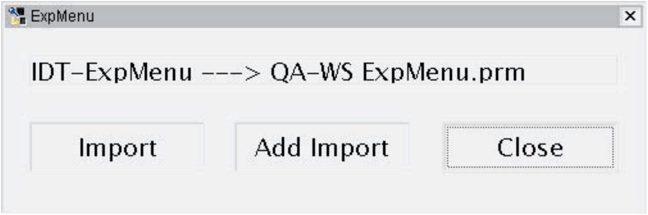
(1) Use either of the following procedures to enable the IDT-4 menu DB to be viewed from the QA-WS.

- Connect the IDT-4 and the QA-WS via network with each other making network access possible from the QA-WS to an IDT-4 file.
- Use an FD to copy IDT-4 menu DB onto the QA-WS.

(2) Open the QA-WS installation folder (basically “C:\Program Files\Hi-cx”) and double-click ExpMenu.exe.

➔ The menu DB conversion tool starts.

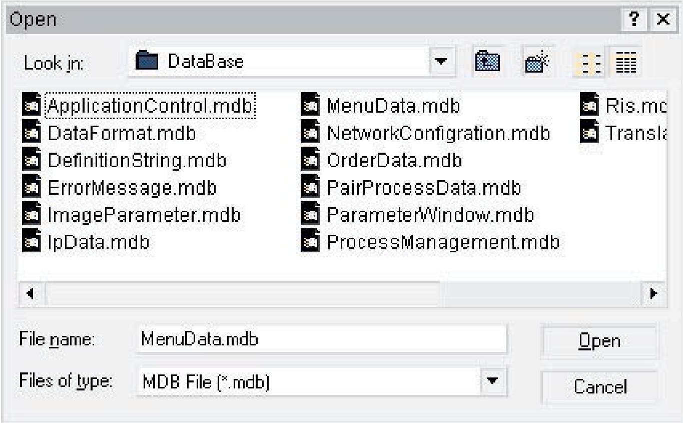
(3) Click Import.



FR5H0139.EPS

➔ A dialog opens to indicate the location of storage of the menu DB to be converted.

(4) Select the IDT-4 menu DB file (MenuData.mdb file) and click Open.


Open
?
✕
Look in:
DataBase
ApplicationControl.mdb
DataFormat.mdb
DefinitionString.mdb
ErrorMessage.mdb
ImageParameter.mdb
IpData.mdb
MenuData.mdb
NetworkConfigration.mdb
OrderData.mdb
PairProcessData.mdb
ParameterWindow.mdb
ProcessManagement.mdb
Ris.mc
Transl
Open
Cancel

File name: MenuData.mdb

Files of type: MDB File (*.mdb)

FR5H0140.EPS

➔ Menu DB conversion processing starts.
If conversion processing is successfully completed, a dialog opens.

(5) Click OK on the dialog thus opened.

(6) If you wish to merge a multiple number of IDT menu DB, click Add Import and repeat steps (4) and (5) above.

(7) When menu DB conversion is completed, click Close.
➔ The menu DB conversion tool quits.
The system returns to the desktop screen.

■ Capturing and reflecting image processing parameters

When image processing parameter values for the relevant MPM codes have been changed on the Image Reader, such changes must be captured and reflected on the QA-WS.

(1) Copy from the Image Reader the following setup files onto the QA-WS installation folder (basically "C:\Program Files\Hi-cx").

Files to be copied from the Image Reader	File content
Hipumn.prm	Image processing parameters (RP, GP for MPM)
Hipopu.prm	Image processing parameters (TAS, DRC for MPM)
Hpu.prm	Image processing parameters (MFC-DRC, MFC-USM for MPM)
Pemu.prm	Image processing parameters (PEM for MPM)
Mpmumn.prm	EDR processing parameters

TR5H0006.EPS

(2) The following two files from among those that have been copied are renamed after copying (because the filenames are different for the QA-WS although the file content remains the same).

Filenames copied from the Image Reader	QA-WS filenames
Hipumn.prm	Stdumn.prm (filename changed)
Hipopu.prm	Opu.prm (filename changed)
Hpu.prm	Hpu.prm
Pemu.prm	Pemu.prm
Mpmumn.prm	Mpmumn.pr

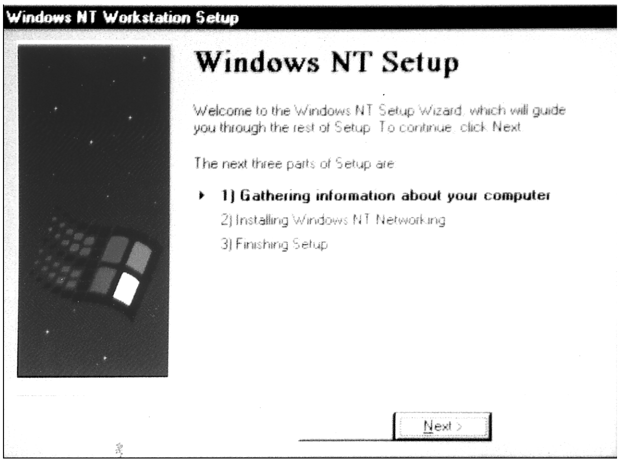
TR5H0007.EPS

Appendix 4. OS Installation After Network Settings When Precision 420 is Used

This appendix describes the OS installation procedure when Precision 420 is used. Because network installation procedures for Precision 410 and 420 are different with each other, the relevant work procedures have been branched away from "■ Installing the Precision 410 Windows NT Network" in "Maintenance Appendix 6. OS Installation When Precision 410 is Used"

■ Continuation of OS installation procedures (from Installing Windows NT Network)

(1) Click [Next >].



Windows NT Workstation Setup

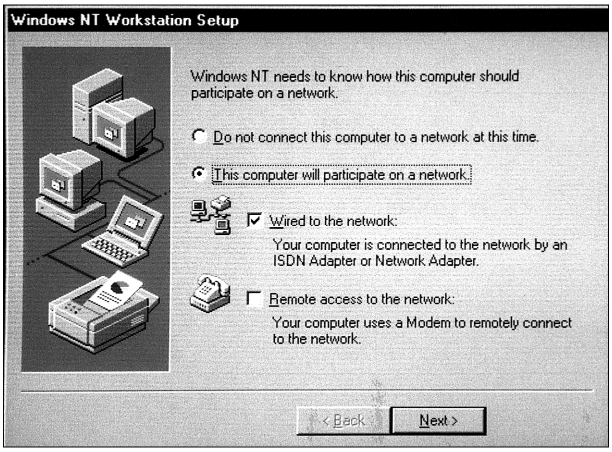
Windows NT Setup

Welcome to the Windows NT Setup Wizard, which will guide you through the rest of Setup. To continue, click Next.

The next three parts of Setup are:

- ▸ **1) Gathering information about your computer**
- 2) Installing Windows NT Networking
- 3) Finishing Setup

(2) Select ○ Do not connect this computer to a network at this time. and click [Next >].



Windows NT Workstation Setup

Windows NT needs to know how this computer should participate on a network.

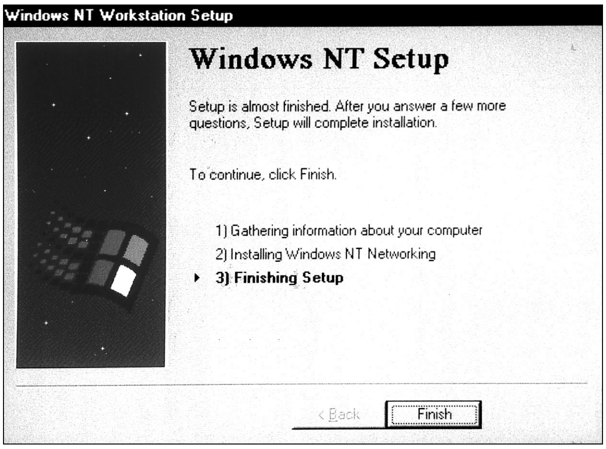
○ Do not connect this computer to a network at this time.

● This computer will participate on a network.

☑ Wired to the network:
Your computer is connected to the network by an ISDN Adapter or Network Adapter.

☐ Remote access to the network:
Your computer uses a Modem to remotely connect to the network.

(3) Click Finish.


Windows NT Workstation Setup
< Back
Finish

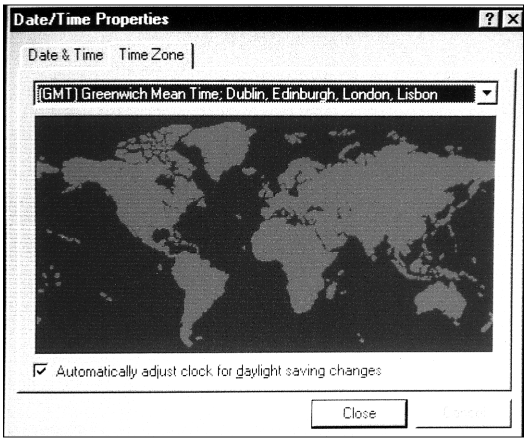
Windows NT Setup

Setup is almost finished. After you answer a few more questions, Setup will complete installation.

To continue, click Finish.

1) Gathering information about your computer
2) Installing Windows NT Networking
▸ **3) Finishing Setup**

(4) At the following menu, make sure that the Date & Time are correct and click Close.


Date/Time Properties
Date & Time
Time Zone
Close
Cancel

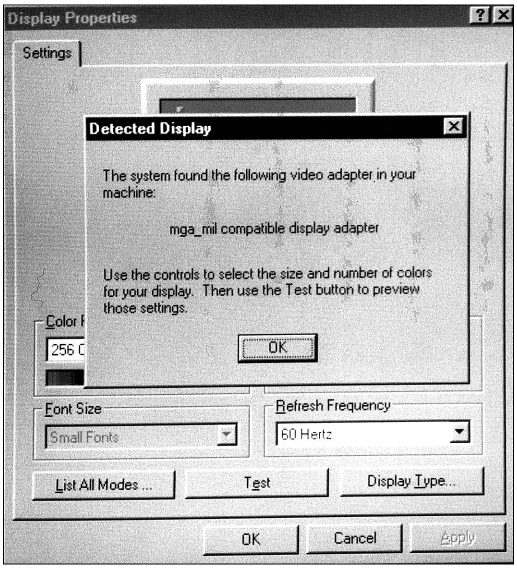
(GMT) Greenwich Mean Time; Dublin, Edinburgh, London, Lisbon

☑ Automatically adjust clock for daylight saving changes

(5) At the “Detected Display” dialog box that appears, confirm the video adapter detected and click OK.

◆ **NOTE** ◆

As installation of the VD is performed after installing Windows NT, detailed settings are not necessary here.

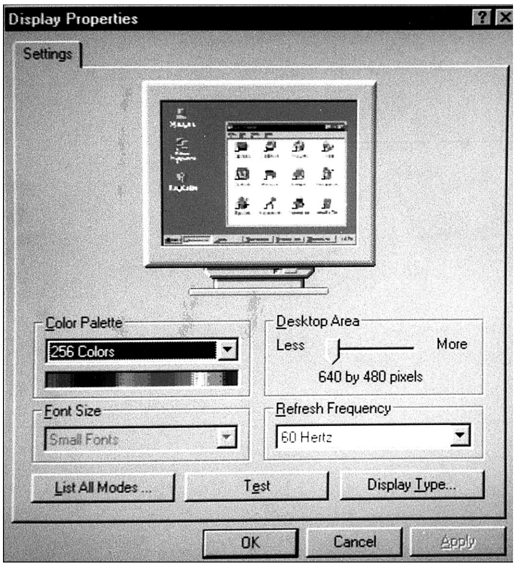

Display Properties
Settings
Detected Display
OK
Color
256 C
Font Size
Small Fonts
Refresh Frequency
60 Hertz
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

The system found the following video adapter in your machine:

mga_mil compatible display adapter

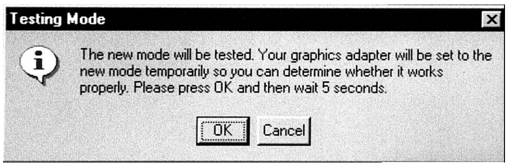
Use the controls to select the size and number of colors for your display. Then use the Test button to preview those settings.

(6) At the “Display Properties” screen shown below, click Test.


Display Properties
Settings
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

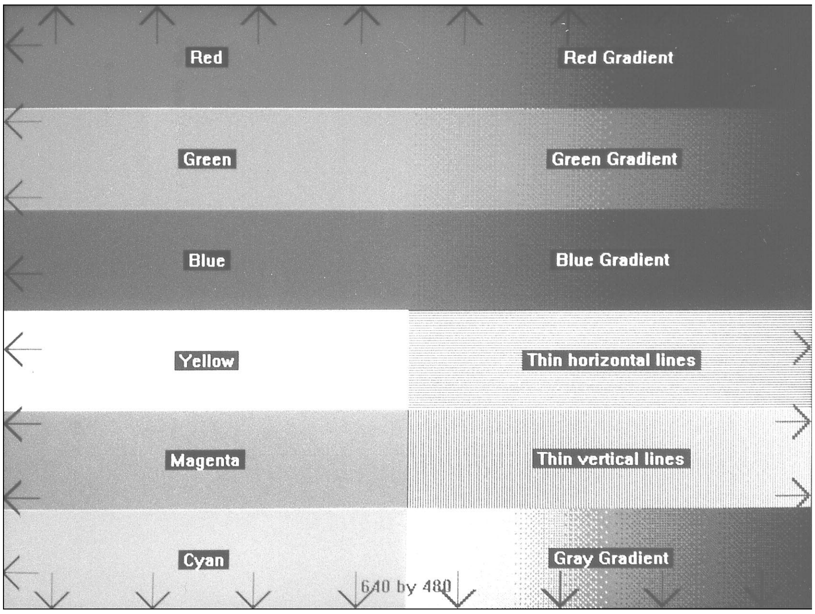
Color Palette: 256 Colors
Desktop Area: Less — More, 640 by 480 pixels
Font Size: Small Fonts
Refresh Frequency: 60 Hertz

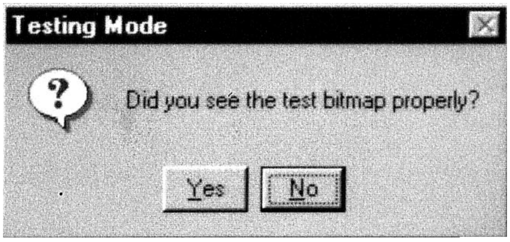
(7) Click OK on the menu below.


Testing Mode
OK
Cancel

The new mode will be tested. Your graphics adapter will be set to the new mode temporarily so you can determine whether it works properly. Please press OK and then wait 5 seconds.

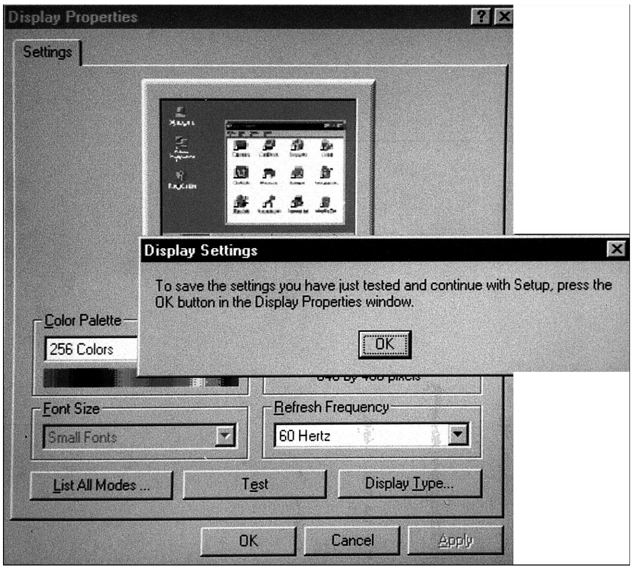
(8) The test bitmap appears for about five seconds.
The “Testing Mode” menu appears then asking you if the test bitmap was displayed properly.
Click Yes.


Red
Red Gradient
Green
Green Gradient
Blue
Blue Gradient
Yellow
Thin horizontal lines
Magenta
Thin vertical lines
Cyan
Gray Gradient
640 by 480


Testing Mode
Yes
No

Did you see the test bitmap properly?

(9) Click OK.


Display Properties
? ✕
Settings
Display Settings
✕
OK
Color Palette
Font Size
Refresh Frequency
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

Display Settings

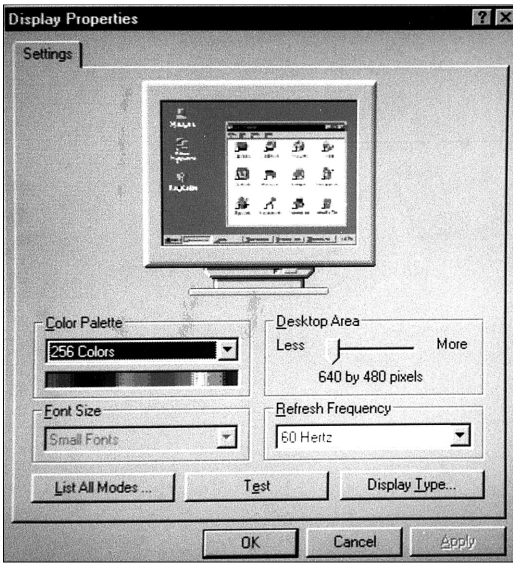
To save the settings you have just tested and continue with Setup, press the OK button in the Display Properties window.

Color Palette: 256 Colors

Font Size: Small Fonts

Refresh Frequency: 60 Hertz

(10) Click OK in the “Display Properties” screen to close it.
Compressed files stored in the CD-ROM will be copied onto the HD.


Display Properties
? ✕
Settings
Less
More
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

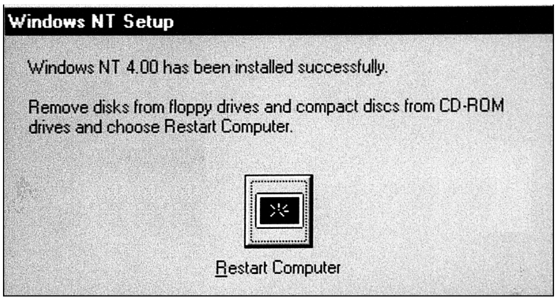
Color Palette: 256 Colors

Desktop Area: 640 by 480 pixels

Font Size: Small Fonts

Refresh Frequency: 60 Hertz

(11) When copying is completed, a menu like that shown below appears. Remove the FD and CD-ROM from the drives and click Restart Computer.


Windows NT Setup
Restart Computer

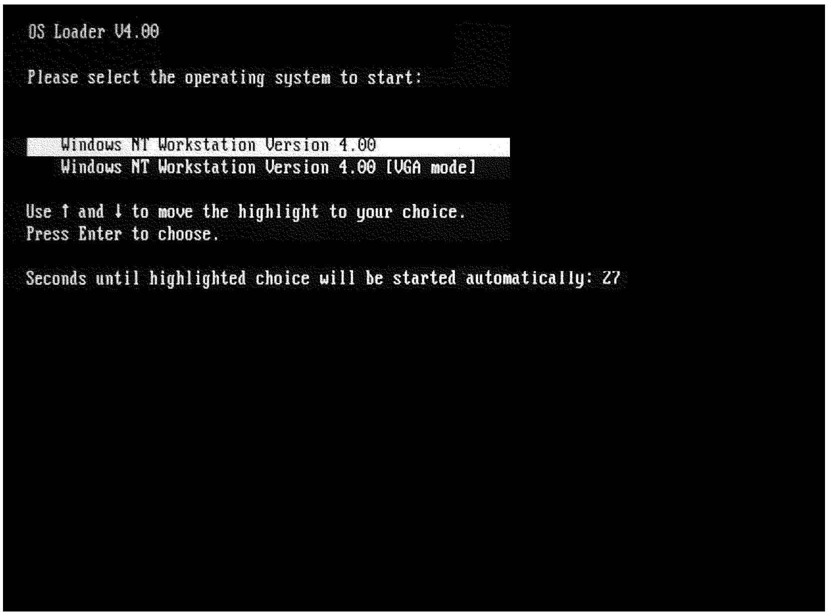
Windows NT 4.00 has been installed successfully.

Remove disks from floppy drives and compact discs from CD-ROM drives and choose Restart Computer.

(12) When the computer restarts in about two minutes and the following screen appears prompting you to select the OS, select “Windows NT Workstation Version 4.00” and then press the <Enter> key.

◆ *REFERENCE* ◆

If the <Enter> key is not pressed within 30 seconds, the OS selected will start.



```
OS Loader V4.00

Please select the operating system to start:


    Windows NT Workstation Version 4.00
    Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 27
```

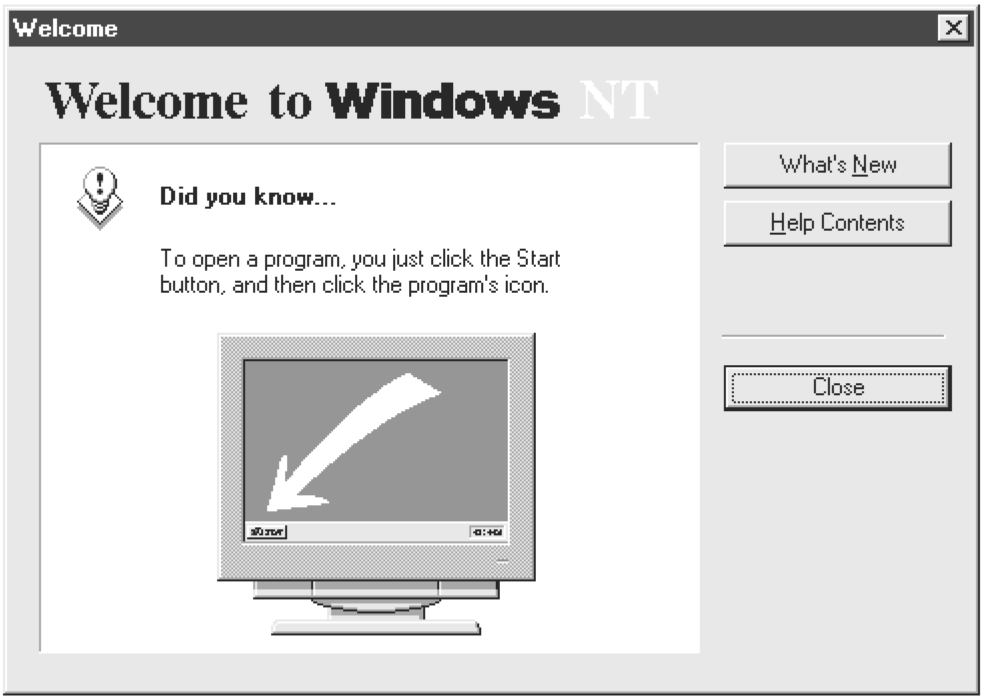
(13) When the “Begin Logon” dialog box appears, press the <Ctrl>, <Alt> and <Delete> keys all together.

(14) When the “Logon Information” dialog box appears, enter the password (“fieldengineer”), and click OK to log onto Windows NT.

◆ *NOTE* ◆

To log onto Windows NT as the Administrator, leave “User Name (U)” as its default setting (“Administrator”).

(15) When logged onto Windows NT, the “Welcome to Windows NT” screen appears.
Click Close to return to the Windows NT desktop screen.



Welcome
Welcome to Windows NT
What's New
Help Contents
Close

Did you know...

To open a program, you just click the Start button, and then click the program's icon.

■ Installing the network driver

Explained below is the network driver installation procedure.

❍ Have the following ready to use for installation.

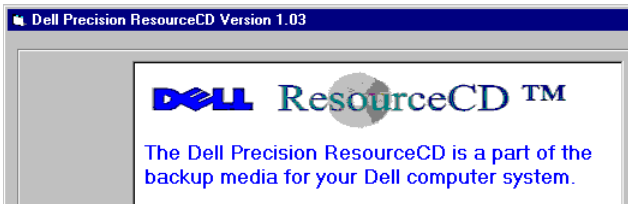
- Dell Precision Resource CD-ROM

(1) Insert the “Dell Precision Resource CD-ROM” into the CD-ROM drive.

➔ After a while, the “Dell Precision ResourceCD Version 1.03” window opens.

(2) Click English.

➔ The usage notice like that shown below appears.



Dell Precision ResourceCD Version 1.03

DELL ResourceCD ™

The Dell Precision ResourceCD is a part of the backup media for your Dell computer system.

FTHF0701.EPS

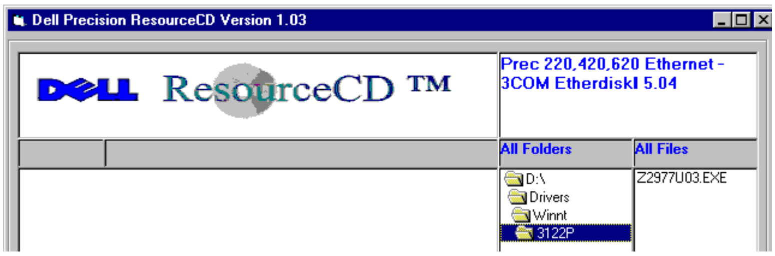
(3) Click ⇨.

➔ The driver selection window opens.

(4) Select DRIVERS from the Directory.

(5) Select WinNT from the OS.

(6) Select 3122P from the part nos.



Dell Precision ResourceCD Version 1.03

DELL ResourceCD ™

Prec 220,420,620 Ethernet - 3COM Etherdiskl 5.04

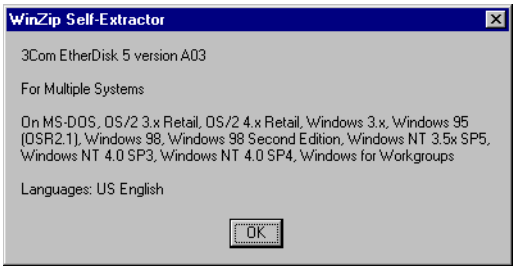
FTHF0706.EPS

➔ The execution file list appears.

(7) Double-click Z2977U03.EXE of “All Files” that is on the right-side of the window.

➔ The “WinZip Self-Extractor” window opens.

(8) Click OK.


WinZip Self-Extractor

3Com EtherDisk 5 version A03

For Multiple Systems

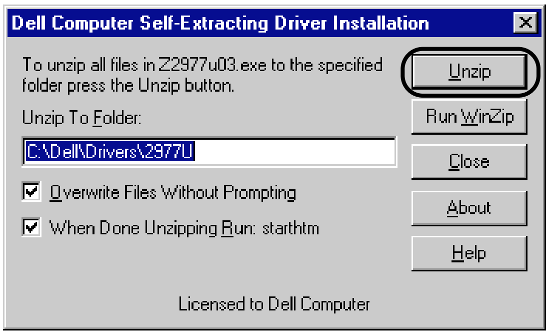
On MS-DOS, OS/2 3.x Retail, OS/2 4.x Retail, Windows 3.x, Windows 95 (OSR2.1), Windows 98, Windows 98 Second Edition, Windows NT 3.5x SP5, Windows NT 4.0 SP3, Windows NT 4.0 SP4, Windows for Workgroups

Languages: US English

FTHF0707.EPS

➔ The “Dell Computer Self-Extracting Driver Installation” window opens.

(9) Click Unzip.


Dell Computer Self-Extracting Driver Installation

To unzip all files in Z2977u03.exe to the specified folder press the Unzip button.

Unzip To Folder: C:\Dell\Drivers\2977U

☑ Overwrite Files Without Prompting

☑ When Done Unzipping Run: starthtm

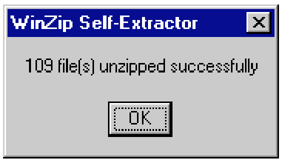
Licensed to Dell Computer

Unzip
Run WinZip
Close
About
Help

FTHF0708.EPS

➔ The Unzip completion window opens.

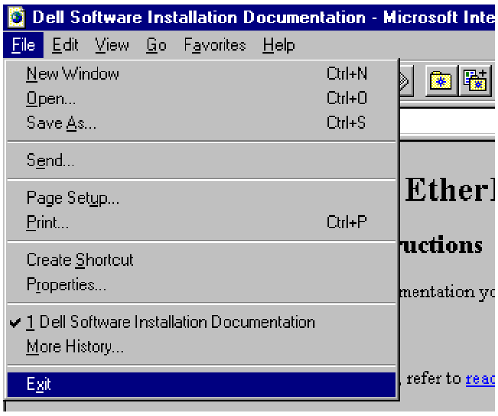
(10) Click OK.


WinZip Self-Extractor

109 file(s) unzipped successfully

FTHF0709.EPS

(11) Select File, then Exit on the Microsoft Internet Explorer window.


Dell Software Installation Documentation - Microsoft Inte
File
Edit
View
Go
Favorites
Help
New Window Ctrl+N
Open... Ctrl+O
Save As... Ctrl+S
Send...
Page Setup...
Print... Ctrl+P
Create Shortcut
Properties...
✓ 1 Dell Software Installation Documentation
More History...
Exit
Ether
uctions
mentation yo
refer to reac

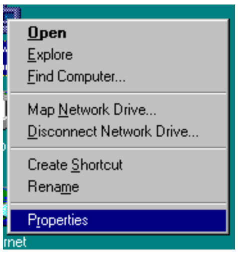
FTHF0711.EPS

(12) Click EXIT on the “Dell Precision ResourceCD Version 1.03” window.

(13) Remove the Dell Precision Resource CD-ROM from the CD-ROM drive.

■ Network settings

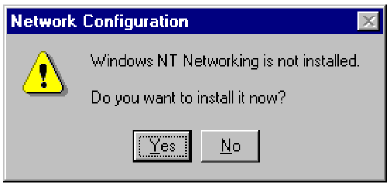
(1) Right-click [Network Neighborhood] on the desktop and select Properties.


Open
Explore
Find Computer...
Map Network Drive...
Disconnect Network Drive...
Create Shortcut
Rename
Properties
rnet

FTHF0713.EPS

➔ The “Network Configuration” window opens.

(2) Click Yes.

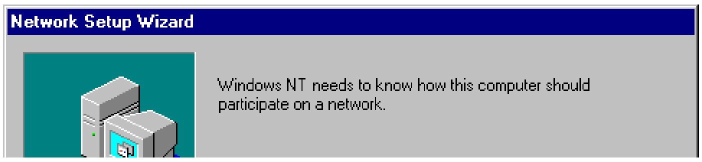

Network Configuration
Yes
No

Windows NT Networking is not installed.

Do you want to install it now?

FTHF0714.EPS

➔ The “Network Setup Wizard” window opens.

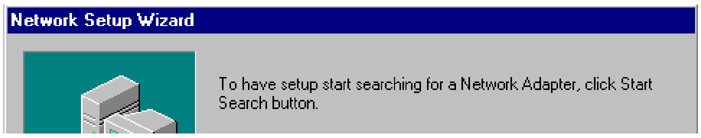

Network Setup Wizard

Windows NT needs to know how this computer should participate on a network.

FTHF0715.EPS

(3) Select ☑ Wired to the network and click Next >.

➔ The “Network Adapters” window opens.

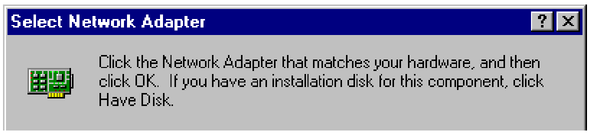

Network Setup Wizard

To have setup start searching for a Network Adapter, click Start Search button.

FTHF0716.EPS

(4) Click Start Search.

➔ The “Select Network Adapter” window opens.


Select Network Adapter
?
✕

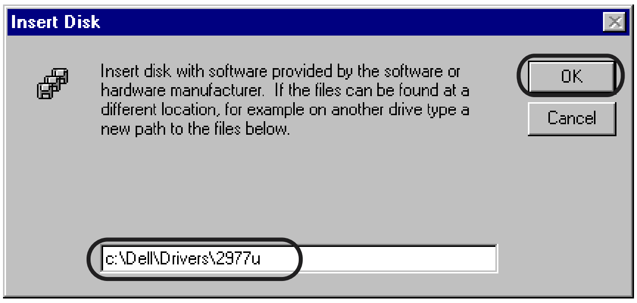
Click the Network Adapter that matches your hardware, and then click OK. If you have an installation disk for this component, click Have Disk.

FTHF0717.EPS

(5) Click Have Disk....

➔ The “Insert Disk” window opens.

(6) Enter the directory path (“C:\Dell\Drivers\2977u”, for example) in which the network adapter driver has been inserted and click OK.



Insert Disk

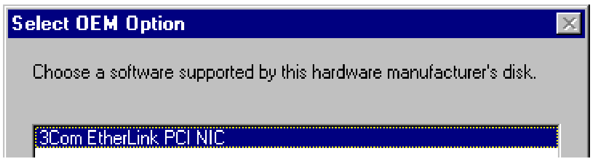
Insert disk with software provided by the software or hardware manufacturer. If the files can be found at a different location, for example on another drive type a new path to the files below.

c:\Dell\Drivers\2977u

FTHF0718.EPS

➔ The “Select OEM Option” window opens.

(7) Make sure that the network adapter has been displayed and click OK.



Select OEM Option

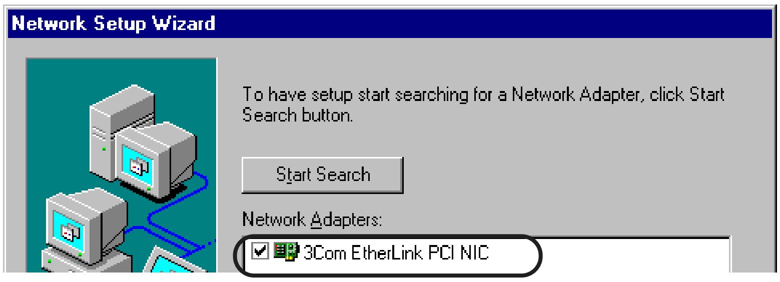
Choose a software supported by this hardware manufacturer's disk.

3Com EtherLink PCI NIC

FTHF0719.EPS

➔ The system returns to the “Network Setup Wizard” window.

(8) Select ☑ 3Com EtherLink PCI NIC and click Next >.



Network Setup Wizard

To have setup start searching for a Network Adapter, click Start Search button.

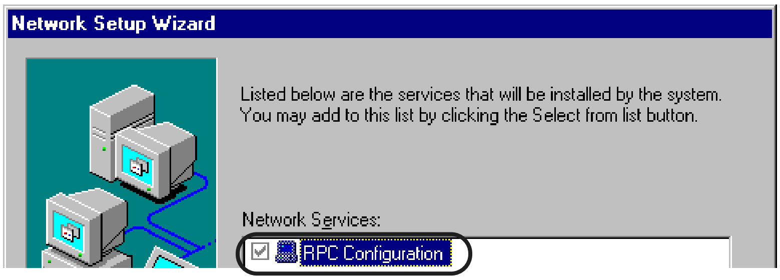
Network Adapters:

☑ 3Com EtherLink PCI NIC

FTHF0720.EPS

➔ The “Network Protocols” window opens.

(9) Make sure that ☑ TCP/IP Protocol has been selected and click Next >.



Network Setup Wizard

Listed below are the services that will be installed by the system. You may add to this list by clicking the Select from list button.

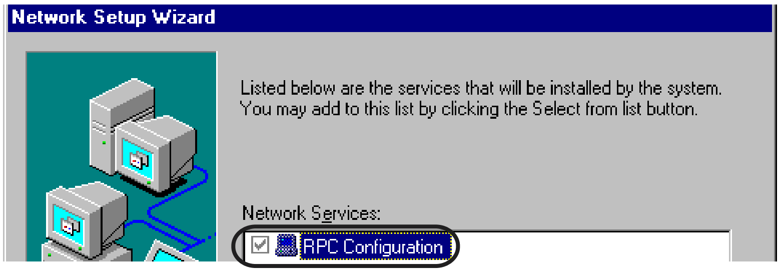
Network Services:

☑ RPC Configuration

FTHF0721.EPS

➔ The “Network Services” selection window opens.

(10) Make sure that ☑ RPC Configuration has been selected and click Next >.



Listed below are the services that will be installed by the system. You may add to this list by clicking the Select from list button.

Network Services:

☑ RPC Configuration

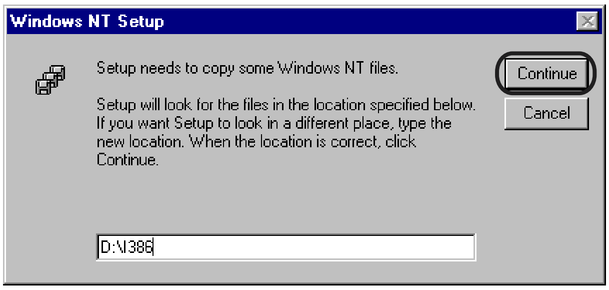
FTHF0722.EPS

➔ The network component installation confirmation window opens.

(11) Click Next >.

➔ The “Windows NT Setup” window opens.

(12) Make sure that D:\I386 has been entered and click Continue.



Setup needs to copy some Windows NT files.

Setup will look for the files in the location specified below. If you want Setup to look in a different place, type the new location. When the location is correct, click Continue.

D:\I386

FTHF0724.EPS

➔ Copying of necessary files will start.

After a while, a window opens asking if you wish to use DHCP.

(13) Click No.

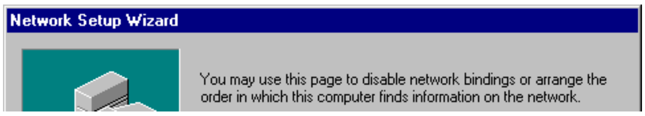
➔ The “Microsoft TCP/IP Properties” window opens.

(14) Set as follows.

- IP Address: : Enter for example “222.222.222.4”.
- Subnet Mask: : Enter for example “255.255.255.0”.

(15) Click OK.

➔ The “Show Bindings for:” window opens.

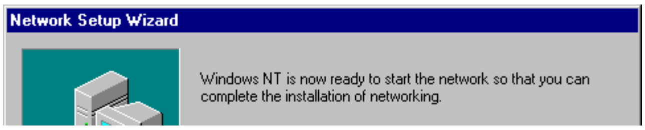


You may use this page to disable network bindings or arrange the order in which this computer finds information on the network.

FTHF0727.EPS

(16) Click Next >.

➔ The network start confirmation window opens.



Windows NT is now ready to start the network so that you can complete the installation of networking.

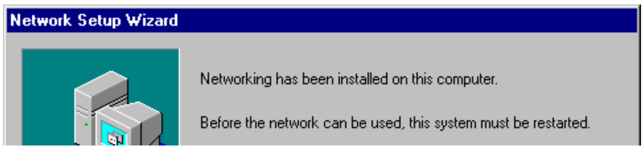
FTHF0728.EPS

(17) Click Next >.

➔ A window opens prompting you to confirm if your computer will be participating in a workgroup.

(18) Make sure that “PC-HIC” has been entered in Computer Name: and click Next >.

➔ A window opens notifying the completion of installation.



Network Setup Wizard

Networking has been installed on this computer.

Before the network can be used, this system must be restarted.

FTHF0730.EPS

(19) Click Finish.

➔ The “Network Settings Change” window opens.

(20) Click Yes.

➔ The computer will restart.

■ Setting Up Virtual Memory

Set up virtual memory for the PC as described below.

(1) Right-click [My Computer] on the desktop and select [Properties].

➔ The “System Properties” window opens.

(2) Select the [Performance] tab and click [Change] of “Virtual Memory”.

➔ The “Virtual Memory” window opens.

(3) Select the [C drive]. Set up the [Initial Size] and [Maximum Size] as follows and then click [OK].

- Initial size (MB) = Real memory size+11
- Maximum size (MB) = Initial size+50

➔ The “System Properties” window opens.

(4) Click [OK].

➔ The PC restarts.

This completes the virtual memory setup procedure.

■ Installing the Service Pack

After OS installation, install the Service Pack from the Windows NT Service Pack CD-ROM.

Install the Service Pack following on-screen instructions. After the completion of installation processing, restart the PC.

Next ▸▸

“16. Creating and Formatting the Image Storage Area on D:”

Appendix 5. Upgrading Software to Version A04

5.1 Software Upgrade Procedure to Version A04

The following setups are necessary. Be sure to observe order of setups shown below.

- Software installation
- File copy
- Registry setup
- Image information file conversion
- Database restructuring
- Marker replacement

❍ Have the following ready for use.

- QA-WS version A04 software installation CD-ROM (“AP-CD” hereafter)

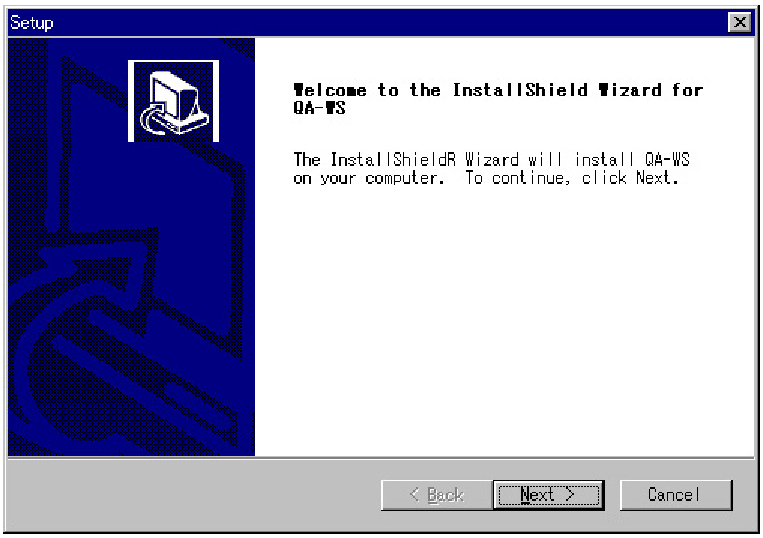
■ Software installation

Install the A04 version software as follows.

(1) Insert the AP-CD into the CD-ROM drive.

➔ After a while, the “Setup” screen appears.

(2) Click [Next >].

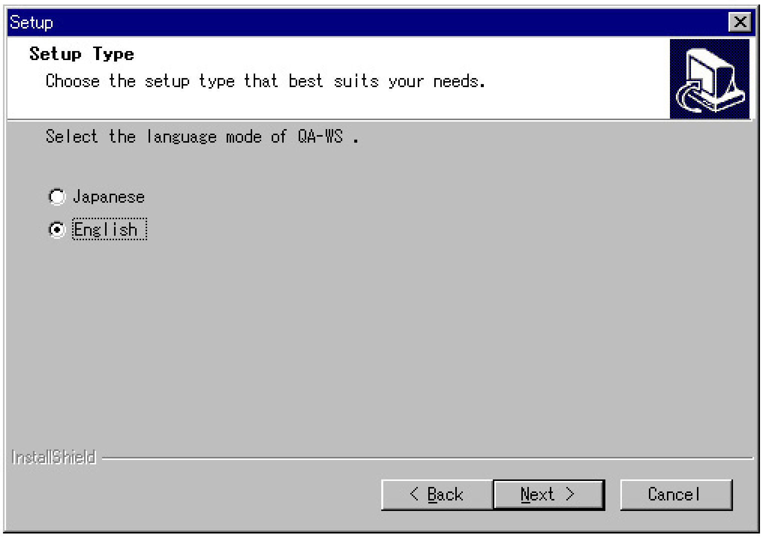


Welcome to the InstallShield Wizard for QA-WS

The InstallShieldR Wizard will install QA-WS on your computer. To continue, click Next.

FR5H0181.EPS

(3) Select “Japanese” or “English” for the language to be used and click Next >.



Setup Type

Choose the setup type that best suits your needs.

Select the language mode of QA-WS .

○ Japanese

● English

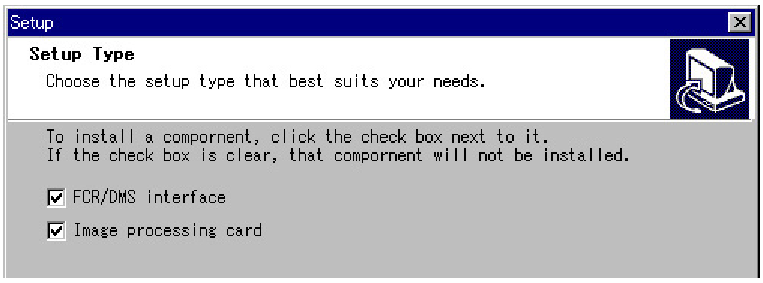
FR5H0182.EPS

(4) Check (☐ ➔ ☑) the item to be used and click Next >.

- ☐ FCR/DMS interface: When using the E-i/f.
- ☐ Image processing card : When using the image processing board.

◆ NOTE ◆

If image processing board has been installed on the QA-WS, be sure to check (☐ ➔ ☑) ☐ Image processing card .



Setup Type

Choose the setup type that best suits your needs.

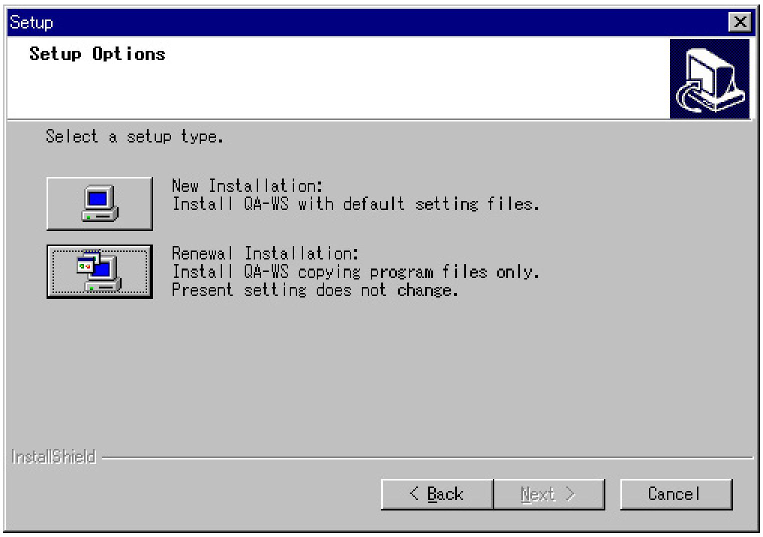
To install a comporent, click the check box next to it.
If the check box is clear, that comporent will not be installed.

☑ FCR/DMS interface

☑ Image processing card

FR5H0183.EPS

(5) For the installation type, click .



Setup Options

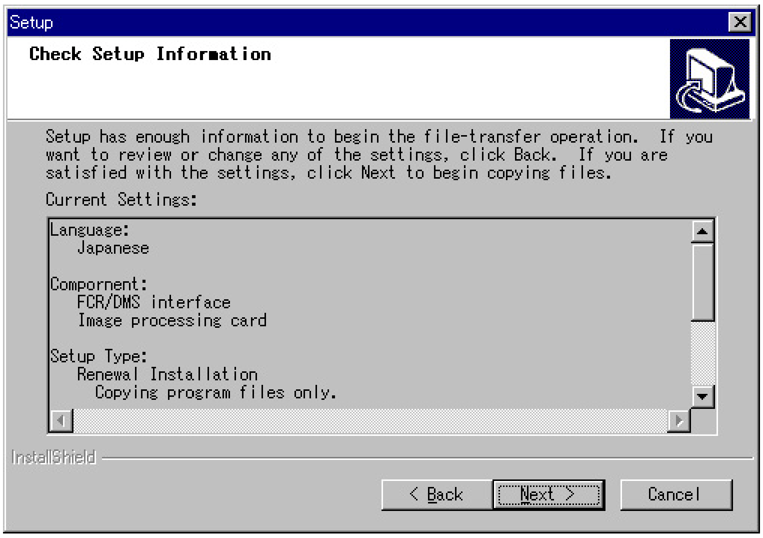
Select a setup type.

New Installation:
Install QA-WS with default setting files.

Renewal Installation:
Install QA-WS copying program files only.
Present setting does not change.

FR5H0184.EPS

(6) Make sure that the content of the "Current Settings:" is as actually has been specified and click [Next >].



Setup

Check Setup Information

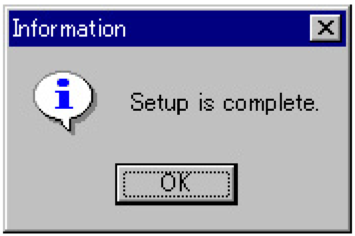
Setup has enough information to begin the file-transfer operation. If you want to review or change any of the settings, click Back. If you are satisfied with the settings, click Next to begin copying files.

Current Settings:

```
Language:
   Japanese

Compornent:
   FCR/DMS interface
   Image processing card

Setup Type:
   Renewal Installation
     Copying program files only.
```

FR5H0185.EPS

(7) Click [OK].

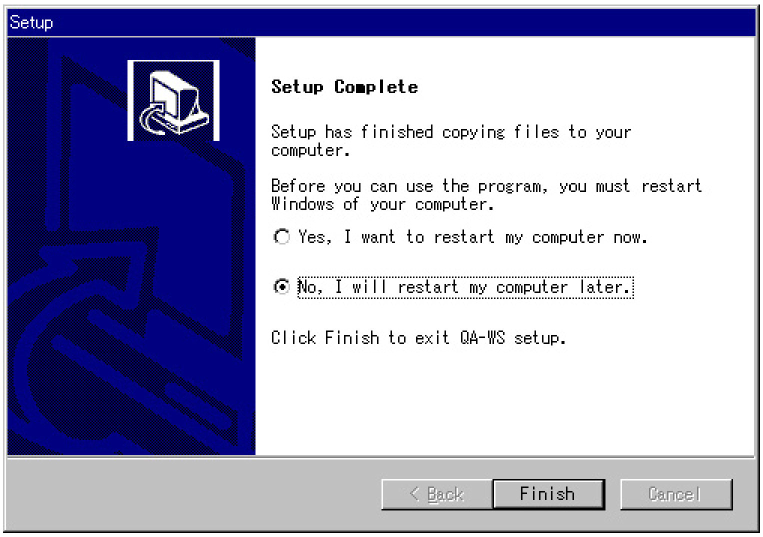


Information

Setup is complete.

FR5H0186.EPS

(8) Select ● No, I will restart my computer later. and click [Finish].



Setup

Setup Complete

Setup has finished copying files to your computer.

Before you can use the program, you must restart Windows of your computer.

○ Yes, I want to restart my computer now.

● No, I will restart my computer later.

Click Finish to exit QA-WS setup.

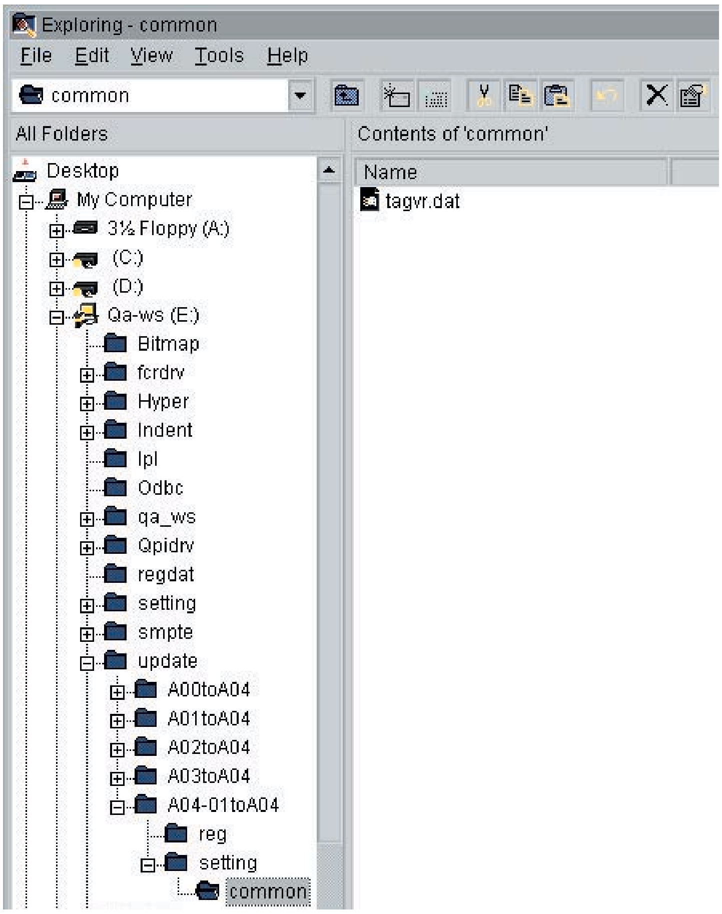
FR5H0187.EPS

■ File copy

Copy files from the AP-CD to the hard disk as necessary.

(1) Open the following folders.

- To upgrade software version from A00 to A04
  "CD-ROM drive: \update\A00toA04\setting\common"
- To upgrade software version from A01-00, A01 or A02-00 to A04
  "CD-ROM drive: \update\A01toA04\setting\common"
- To upgrade software version from A02-01, A02-02, A02-03, A02, A03-00 or A03-01 to A04
  "CD-ROM drive: \update\A02toA04\setting\common"
- To upgrade software version from A03, Y00 or A4-00 to A04
  "CD-ROM drive: \update\A03toA04\setting\common"
- To upgrade software version from A4-01 or A04-02 to A04
  "CD-ROM drive: \update\A04-01toA04\setting\common"


Exploring - common
File
Edit
View
Tools
Help
common
All Folders
Contents of 'common'
Desktop
My Computer
3½ Floppy (A:)
(C:)
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
smpte
update
A00toA04
A01toA04
A02toA04
A03toA04
A04-01toA04
reg
setting
common
Name
tagvr.dat

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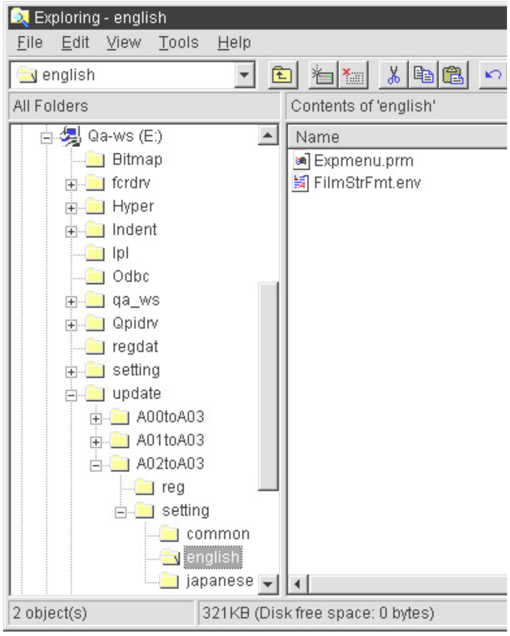
(2) Copy all the files contained in the "common" folder to "C:\Program Files\Hi-cx" folder.

(3) Open the following folders.

- To upgrade software version from A00 to A04
  “CD-ROM drive: \update\A00toA04\setting\japanese or english”
- To upgrade software version from A01-00, A01 or A02-00 to A04
  “CD-ROM drive: \update\A01toA04\setting\japanese or english”
- To upgrade software version from A02-01, A02-02, A02-03, A02, A03-00 or A03-01 to A04
  “CD-ROM drive: \update\A02toA04\setting\japanese or english”

◆ NOTE ◆

For whether “japanese” or “english”, be sure to select the same folder as the language that has been selected for AP installation.


Exploring - english
File Edit View Tools Help
english
All Folders
Contents of 'english'
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
update
A00toA03
A01toA03
A02toA03
reg
setting
common
english
japanese
Name
Expmenu.prm
FilmStrFmt.env
2 object(s)
321KB (Disk free space: 0 bytes)

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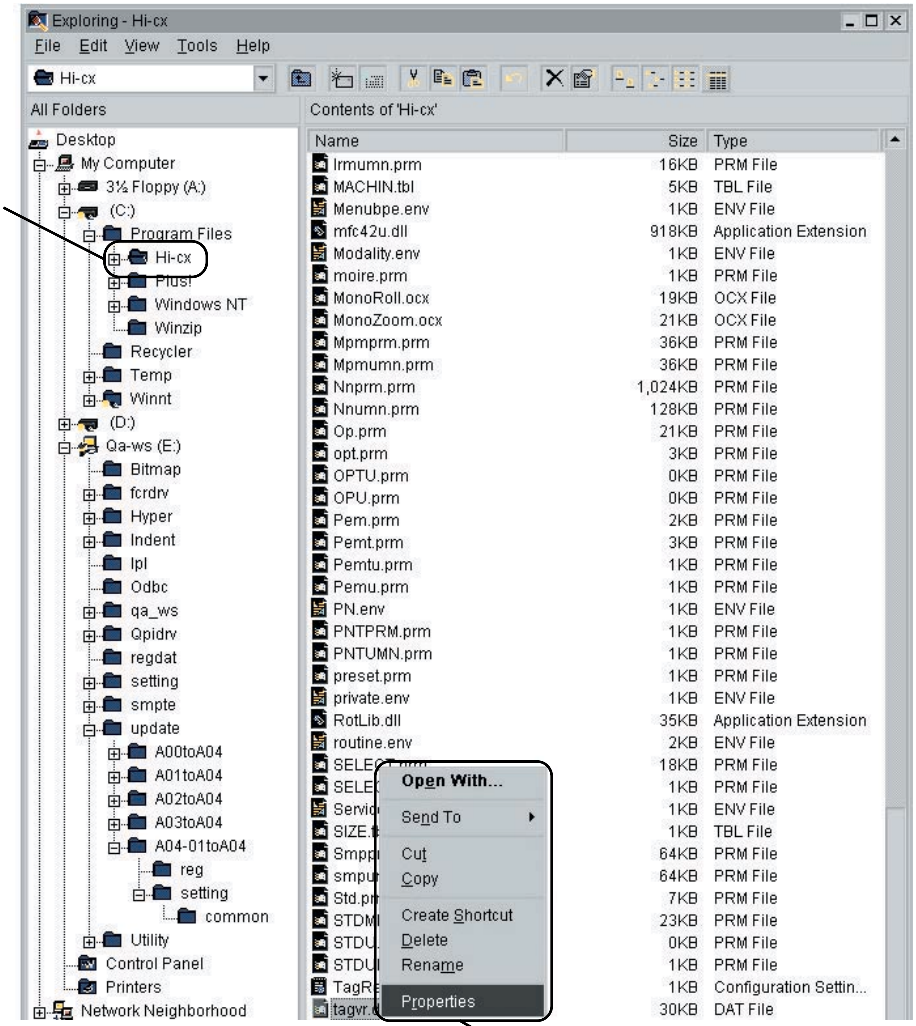
(4) Copy all the files contained in the “japanese” or “english” folder to “C:\Program Files\Hi-cx” folder.

(5) From the “C:\Program Files\Hi-cx” folder, select all the files copied in steps (2) and (4) above.

(6) Right-click the mouse to select Properties dialog box from the menu.


Exploring - Hi-cx
File Edit View Tools Help
Hi-cx
All Folders
Contents of 'Hi-cx'
Desktop
My Computer
3½ Floppy (A:)
(C:)
Program Files
Hi-cx
Plus!
Windows NT
Winzip
Recycler
Temp
Winnt
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
smpte
update
A00toA04
A01toA04
A02toA04
A03toA04
A04-01toA04
reg
setting
common
Utility
Control Panel
Printers
Network Neighborhood
Open With...
Send To
Cut
Copy
Create Shortcut
Delete
Rename
Properties

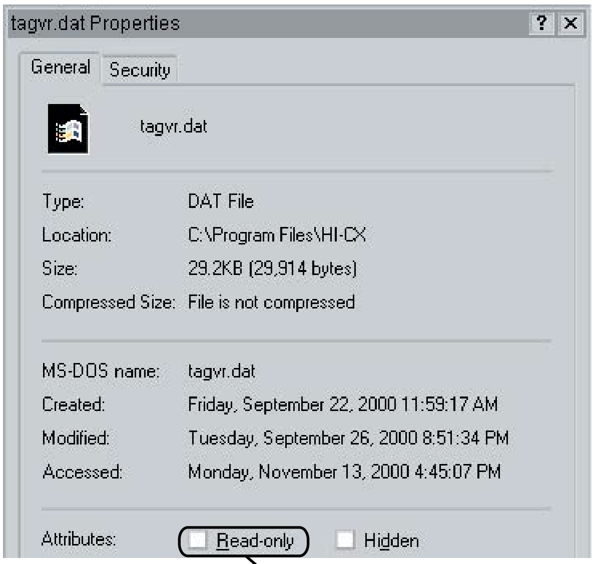
Name	Size	Type
Irmumn.prm	16KB	PRM File
MACHIN.tbl	5KB	TBL File
Menubpe.env	1KB	ENV File
mfc42u.dll	918KB	Application Extension
Modality.env	1KB	ENV File
moire.prm	1KB	PRM File
MonoRoll.ocx	19KB	OCX File
MonoZoom.ocx	21KB	OCX File
Mpmprm.prm	36KB	PRM File
Mpmumn.prm	36KB	PRM File
Nnprm.prm	1,024KB	PRM File
Nnumn.prm	128KB	PRM File
Op.prm	21KB	PRM File
opt.prm	3KB	PRM File
OPTU.prm	0KB	PRM File
OPU.prm	0KB	PRM File
Pem.prm	2KB	PRM File
Pemt.prm	3KB	PRM File
Pemtu.prm	1KB	PRM File
Pemu.prm	1KB	PRM File
PN.env	1KB	ENV File
PNTPRM.prm	1KB	PRM File
PNTUMN.prm	1KB	PRM File
preset.prm	1KB	PRM File
private.env	1KB	ENV File
RotLib.dll	35KB	Application Extension
routine.env	2KB	ENV File
SELEC	18KB	PRM File
SELE	1KB	PRM File
Servi	1KB	ENV File
SIZE.t	1KB	TBL File
Smpp	64KB	PRM File
smpu	64KB	PRM File
Std.p	7KB	PRM File
STDM	23KB	PRM File
STDU	0KB	PRM File
STDU	1KB	PRM File
TagR	1KB	Configuration Settin...
tagvr.d	30KB	DAT File

Folder selected for AP installation

Menu

FR5H0150.EPS

(7) Deselect (☑ ➔ ☐) the ☐ Read-only property dialog box and click OK.


tagvr.dat Properties
? ×
General
Security

tagvr.dat

Type: DAT File
Location: C:\Program Files\HI-CX
Size: 29.2KB (29,914 bytes)
Compressed Size: File is not compressed

MS-DOS name: tagvr.dat
Created: Friday, September 22, 2000 11:59:17 AM
Modified: Tuesday, September 26, 2000 8:51:34 PM
Accessed: Monday, November 13, 2000 4:45:07 PM

Attributes: ☐ Read-only ☐ Hidden

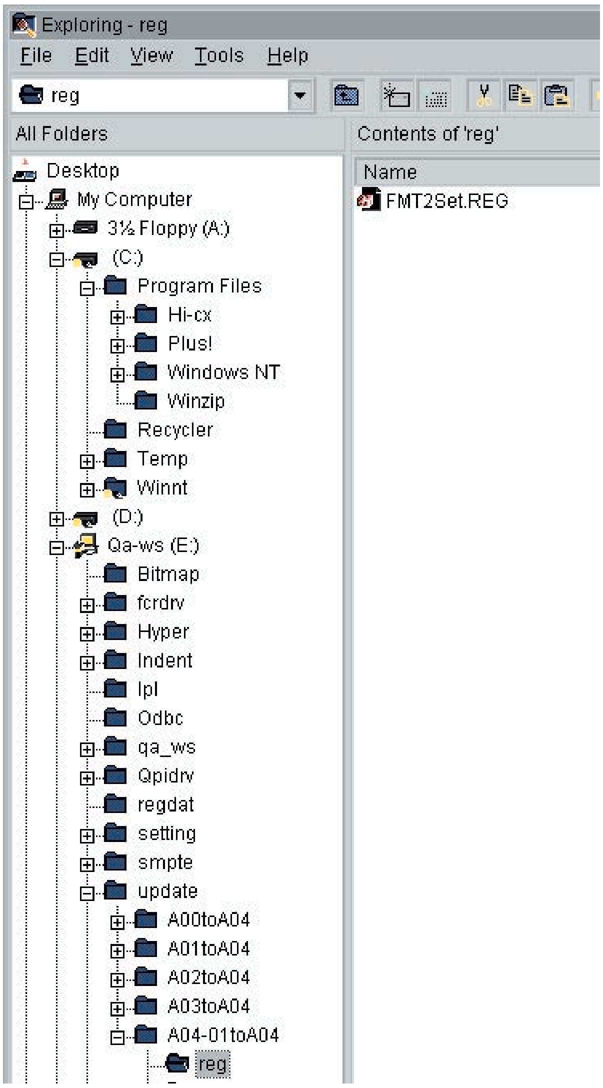
For read only

FR5H0151.EPS

■ Registry setup

(1) Open the following folders.

- To upgrade software version from A00 to A04
  "CD-ROM drive: \update\A00toA04\reg"
- To upgrade software version from A01-00, A01 or A02-00 to A04
  "CD-ROM drive: \update\A01toA04\reg"
- To upgrade software version from A02-01, A02-02, A02-03, A02, A03-00 or A03-01 to A04
  "CD-ROM drive: \update\A02toA04\reg"
- To upgrade software version from A03, Y00 or A4-00 to A04
  "CD-ROM drive: \update\A03toA04\reg"
- To upgrade software version from A4-01 or A04-02 to A04
  "CD.-ROM drive: \update\A04-01toA04\reg"


Exploring - reg
File Edit View Tools Help
reg
All Folders
Contents of 'reg'
Name
FMT2Set.REG
Desktop
My Computer
3½ Floppy (A:)
(C:)
Program Files
Hi-cx
Plus!
Windows NT
Winzip
Recycler
Temp
Winnt
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
smpte
update
A00toA04
A01toA04
A02toA04
A03toA04
A04-01toA04
reg

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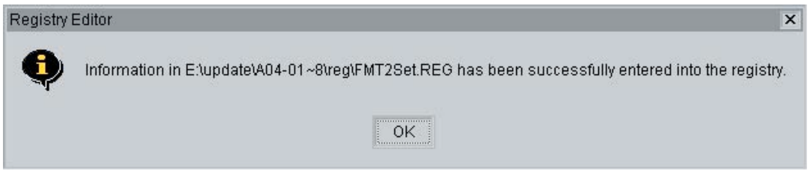
(2) Double-click the registry file contained in the “reg” folder.

➔ A window opens to indicate the completion of registry setup.

(3) Click OK.



Information in E:\update\A04-01~8\reg\FMT2Set.REG has been successfully entered into the registry.

FR5H0153.EPS

◆ ***SUPPLEMENT***◆

When multiple registry files exist in the “reg” folder, repeat steps (2) and (3).

■ Image information file conversion

File conversion is necessary because the content of the image information file differs from that of the previous software version.

(1) Open the “C:\Program Files\Hi-cx” folder.

(2) Double-click ImgInfoConv.

➔ The converter starts up.

(3) Click Convert.

➔ The screen that indicates the completion of conversion appears.

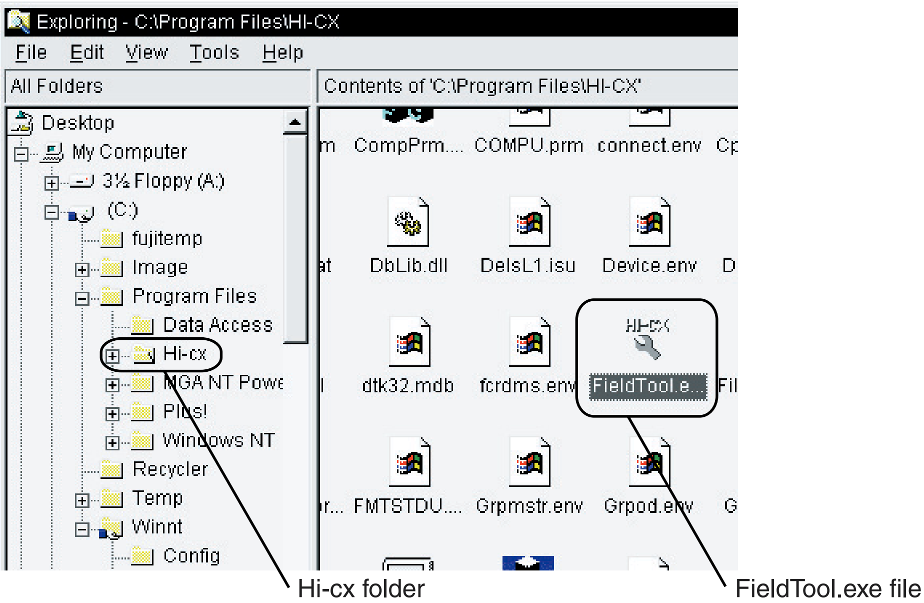
(4) Click OK.

■ Database restructuring

When the AP version has been upgraded, the database should be restructured.

(1) Open the “C:\Program Files\Hi-cx” folder.

(2) Double-click the FieldTool.e... file.


Exploring - C:\Program Files\HI-CX
File Edit View Tools Help
All Folders
Contents of 'C:\Program Files\HI-CX'
Desktop
My Computer
3½ Floppy (A:)
(C:)
fujitemp
Image
Program Files
Data Access
Hi-cx
MGA NT Powe
Plus!
Windows NT
Recycler
Temp
Winnt
Config
CompPrm....
COMPU.prm
connect.env
DbLib.dll
DelsL1.isu
Device.env
dtk32.mdb
fcrdms.env
FieldTool.e...
FMTSTDU....
Grpmstr.env
Grpod.env
Hi-cx folder
FieldTool.exe file

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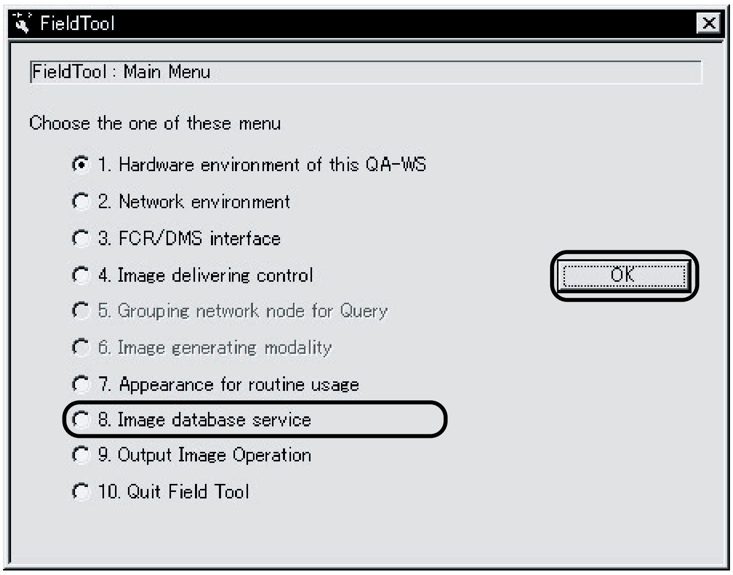
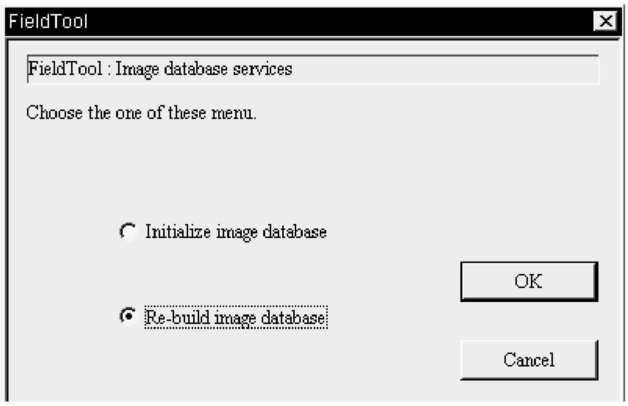
(3) Select ○ 8. Image database service and click OK.


FieldTool
FieldTool : Main Menu
Choose the one of these menu
● 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
○ 8. Image database service
○ 9. Output Image Operation
○ 10. Quit Field Tool
OK

FR5H0155.EPS

(4) Select ● Re-build image database and click OK.



FieldTool

FieldTool : Image database services

Choose the one of these menu.

○ Initialize image database

● Re-build image database

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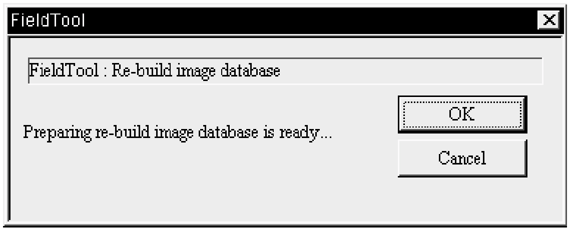
(5) Click OK.



FieldTool

FieldTool : Re-build image database

Preparing re-build image database is ready...

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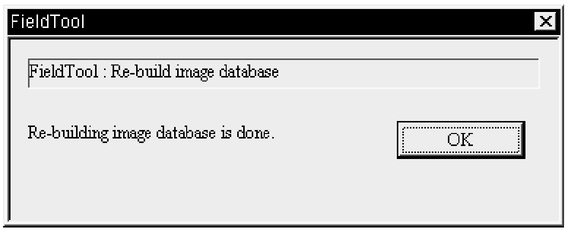
➔ Database will be restructured.

(6) Click OK.



FieldTool

FieldTool : Re-build image database

Re-building image database is done.

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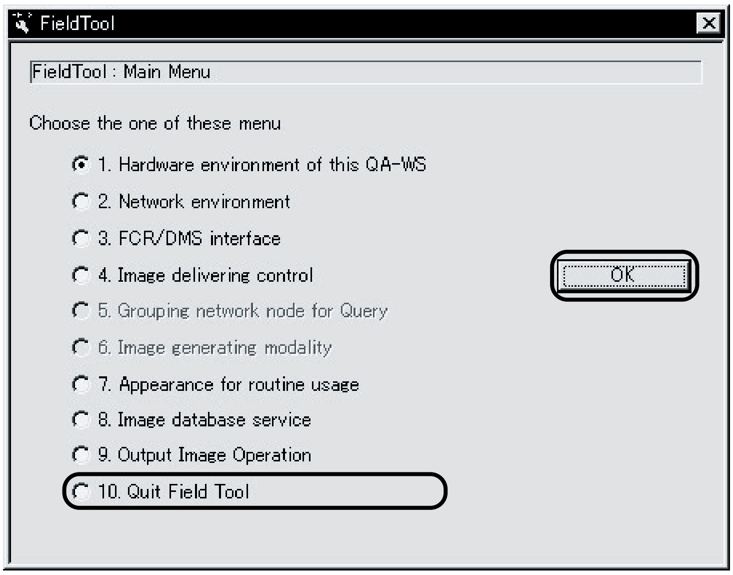
(7) Click Cancel several times.

➔ The system returns to the FieldTool main menu.

(8) Select ○ 10. Quit Field Tool and click OK.



FieldTool
FieldTool : Main Menu
Choose the one of these menu
● 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
○ 8. Image database service
○ 9. Output Image Operation
○ 10. Quit Field Tool
OK

FR5H0159.EPS

➔ The FieldTool main menu will quit.

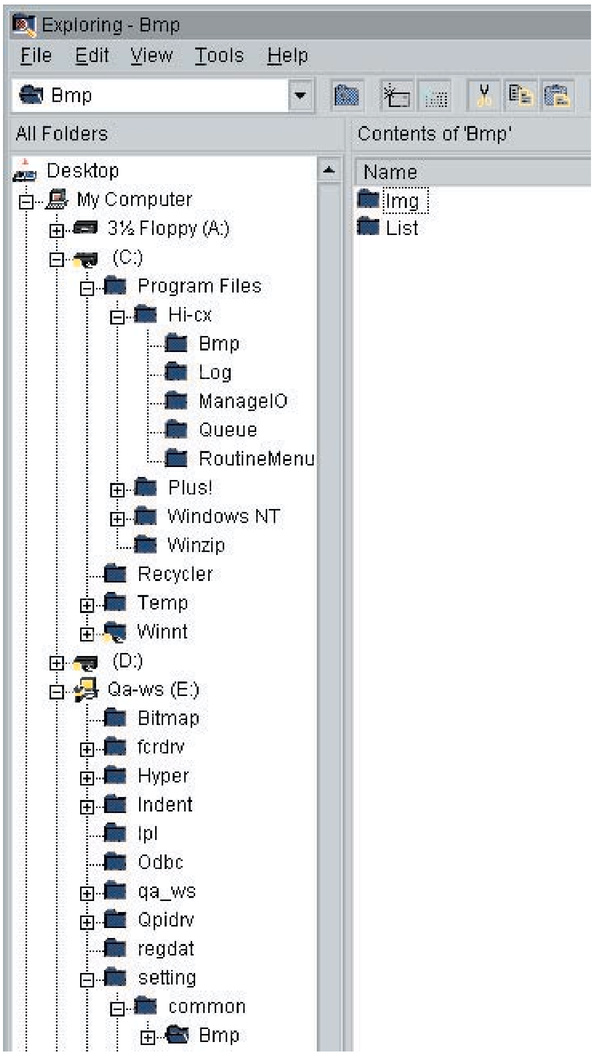
■ Marker replacement

Some new markers have been added for the new software version. Because registration sizes of the new markers are different from those of previous versions, the old markers cannot be used.
Replace therefore the markers as follows.

(1) Open the “C:\Program Files\Hi-cx\BMP” folder.

(2) Delete all folders from the “BMP” folder.

(3) Open the “CD-ROM drive:\setting\common\BMP” folder.


Exploring - Bmp
File Edit View Tools Help
Bmp
All Folders
Contents of 'Bmp'
Desktop
My Computer
3½ Floppy (A:)
(C:)
Program Files
Hi-cx
Bmp
Log
ManageIO
Queue
RoutineMenu
Plus!
Windows NT
Winzip
Recycler
Temp
Winnt
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
common
Bmp
Name
Img
List

FR5H0160.EPS

(4) Copy all folders contained in the “BMP” folder of the CD-ROM drive onto “C:\Program Files\Hi-cx\BMP”.

(5) From the “C:\Program Files\Hi-cx\BMP” folder, select all folders copied in step (4) above and files contained in those folders.

(6) Right-click the mouse to select Properties from the menu.
➔ The properties dialog box appears.

(7) Deselect (☑ ➔ ☐) ☐ Read-only of the properties dialog box and click OK.

5.2 Settings for Editing Tag Information

With the A04 version software, you can edit (copy, move, delete or set initial values) tag information when printing images via the DICOM. To edit tag information, open the setup file (TagReplace.ini) for describing the content of tag information editing. The editing procedure follows.

(1) Open the “C:\Program Files\Hi-cx” folder.

(2) Use the memo (NotePad.exe) to open the TagReplace.ini file.

◆ *SIPPLMENT* ◆

Note that nothing has been described in the default TagReplace.ini file.

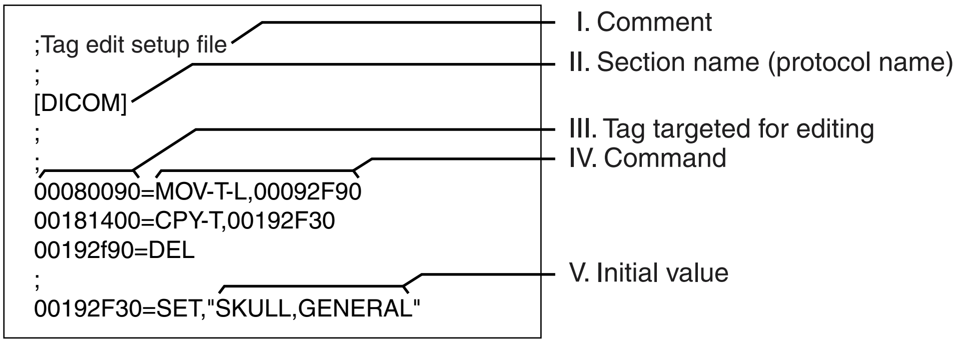
(3) Observe the format detailed hereafter to describe in the file the content for editing.

◆ *SIPPLEMENT* ◆

Only the “character string” is supported for VR of the tag targeted for editing. If VR of the tag described in the setup file is not the “character string”, the relevant error dialog will be displayed when the QA-WS is started.

(4) Save the TagReplace.ini file in the UNICODE format, then close the memo (NotePad.exe).

■ TagReplace.ini file format



```
;Tag edit setup file
;
[DICOM]
;
;
00080090=MOV-T-L,00092F90
00181400=CPY-T,00192F30
00192f90=DEL
;
00192F30=SET,"SKULL,GENERAL"
```

I. Comment
II. Section name (protocol name)
III. Tag targeted for editing
IV. Command
V. Initial value

FR5H0178.EPS

I. Comment

The line with a semi-colon (;) on its head will be handled as a comment.

II. Section name (protocol name)

For the section name, use brackets ([ ]) to describe the protocol name targeted for editing the tag information. The A04 version software supports only the DICOM.

III. Tag targeted for editing

The group/element number of the tag information targeted for editing is described with a number fixed to eight characters.

IV. Command

See the table below to describe here a command used for editing tag information.

V. Initial value

Describe an initial value to be set for the element of tag information, using a character string in the format that complies with VR.

Commands that can be used are as follows.

Command		**Description**
CPY	Function	Copies elements from other tags.
	Format	Tag targeted for editing=CPY[-T], original tag to be edited -T: Deletes blanks of the head and end of the element of the original tag to be edited and then copies the element. ➔ see the example below.
MOV	Function	Moves elements from other tags.
	Format	Tag targeted for editing=MOV[-T][-L], original tag to be edited -L: Adjusts 0 (zero) the length of the element of the original tag to be edited. -T: Deletes blanks of the head and end of the element of the original tag to be edited and then copies the element. ➔ see the example below.
DEL	Function	Deletes elements.
	Format	Tag targeted for editing=DEL[-L] -L: Adjusts 0 (zero) the length of the element of the tag targeted for editing.
SET	Function	Sets fixed initial values for elements.
	Format	Tag targeted for editing=SET,”initial value”

TR5H0179.EPS

Example : If the original tag is “ΔΔABΔCΔ”, “ABΔC” will be copied or moved.

◆ *NOTE* ◆

- *When describing the TagReplace.ini file, be sure to set data that is complied with DICOM VR. Do not perform any settings that may arise contradiction in the internal data.*
- *Although VRs are different with each other between one tag targeted for editing and the original tag to be edited, editing is possible for the characters strings of both the tags. Note however that character strings exceeding the length determined by VR of the tag targeted for editing will be set as they are with no checkout performed.*
- *No editing will be performed when no relevant tags or elements exist and no initial values set for the element to be copied or to be moved.*
- *The commands in the table above are available for DICOM-conformed tags of other manufacturers and FujiFilm’s DICOM Private tags. To edit Privates tags other than FujiFilm’s, be sure to describe tag information using the same element number as that of the Private Creator described in the Private.env file. For FujiFilm tags, use always “2F” for the Private Creator element number.*
- *For details of FujiFilm Private tags, see the “DICOM Conformance Statement”.*

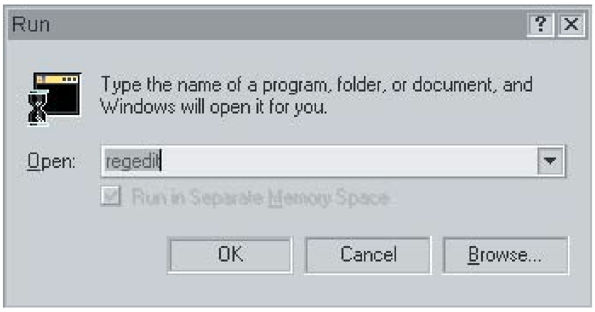
5.3 Mouse-dragging to Change Density/Contrast

With the A04 version software, the amount of mouse movement (pixel values) for changing the minimum units of density (GS) and contrast (GA) can be changed by setting the registry. Described below is the procedure to be observed.

(1) On the desktop screen, select “Run” from the “Start” menu.

➔ The “Run” window opens.

(2) Enter “regedit” in Open: and click OK.



Run

Type the name of a program, folder, or document, and Windows will open it for you.

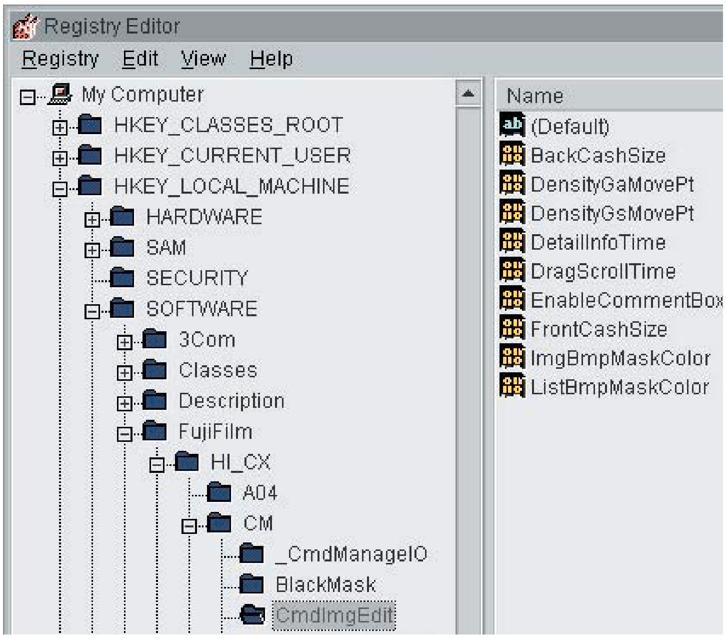
Open: regedit

? ✕
☑ Run in Separate Memory Space
OK
Cancel
Browse...

FR5H0162.EPS

➔ The “Registry Editor” window opens.

(3) Open the “HKEY_LOCAL_MACHINE/SOFTWARE/Fujifilm/HI_CX/CM/CmdimgEdit” folder.



Registry Editor
Registry Edit View Help
My Computer
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HARDWARE
SAM
SECURITY
SOFTWARE
3Com
Classes
Description
FujiFilm
HI_CX
A04
CM
_CmdManageIO
BlackMask
CmdImgEdit
Name
(Default)
BackCashSize
DensityGaMovePt
DensityGsMovePt
DetailInfoTime
DragScrollTime
EnableCommentBox
FrontCashSize
ImgBmpMaskColor
ListBmpMaskColor

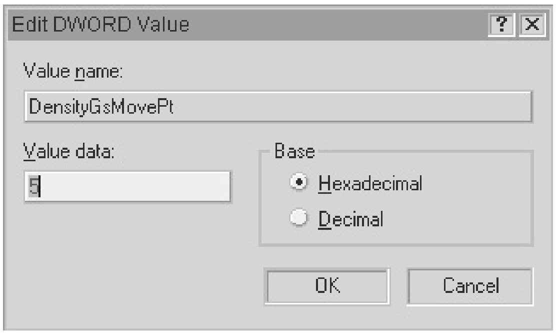
FR5H0163.EPS

(4) Click either of the following registry files.

- DensityGsMovePt :
  When changing the amount of mouse movement necessary to change the minimum unit of density (GS).
- DensityGaMovePt :
  When changing the amount of mouse movement necessary to change the minimum unit of contrast (GA).

➔ The “Edit DWORD Value” window opens.

(5) Enter the amount of mouse movement (pixel values) in Value data: 5.



Value name: DensityGsMovePt

Value data: 5

● Hexadecimal

○ Decimal

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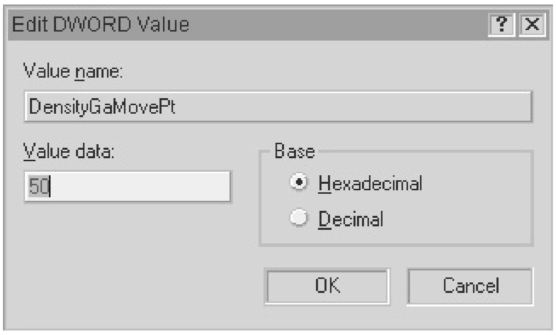

Value name: DensityGaMovePt

Value data: 50

● Hexadecimal

○ Decimal

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- DensityGsMovePt :
  Enter the amount of mouse movement (pixel values) necessary to change density (GS) by 0.01 (minimum unit). The default is 5 (decimally expressed).
- DensityGaMovePt :
  Enter the amount of mouse movement (pixel values) necessary to change contrast (GA) by 0.1 (minimum unit). The default is 50 (decimally expressed).

(6) Click OK.

(7) Click the ☒ sign within the “Registry Editor” window.
➔ The system returns to the desktop screen.

5.4 Settings for the DICOM Protocol Log Function

A function has been added for the A04 version software so that DICOM protocol logs can be acquired using the log function that is supported by the DICOM Tool Kit ("DTK" hereinafter). This function is available for service personnel allowing them to check connections using the DICOM protocols.

This function can be set on the registry and the following settings are possible.
- Enabling/disabling the log function
- Setting log levels
- Setting log information

NOTE

To make use of this function, it is provided that the DICOM protocols have been made available. Be sure to check the following before setting this function.

- *The DICOM key has been installed.*
- *Settings of DICOM FiedldTool have been completed.*

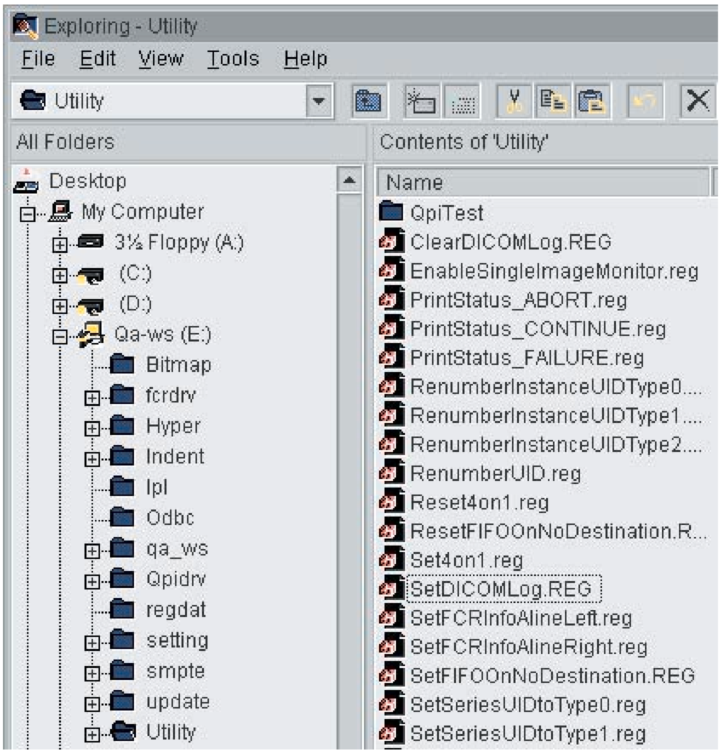
■ Enabling the log function

Described below is the procedure to be observed for enabling the DICOM protocol log function.

(1) Insert the AP-CD into the CD-ROM drive.

(2) Open the "CD-ROM drive:\Utility" folder.

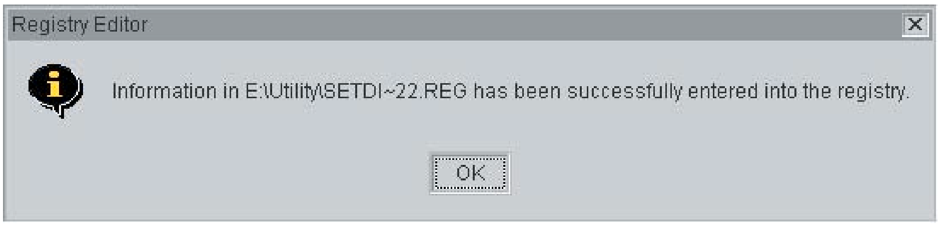
(3) Double-click SetDICOMLog.REG.


Exploring - Utility
File
Edit
View
Tools
Help
Utility
All Folders
Contents of 'Utility'
Desktop
My Computer
3½ Floppy (A:)
(C:)
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
smpte
update
Utility
Name
QpiTest
ClearDICOMLog.REG
EnableSingleImageMonitor.reg
PrintStatus_ABORT.reg
PrintStatus_CONTINUE.reg
PrintStatus_FAILURE.reg
RenumberInstanceUIDType0....
RenumberInstanceUIDType1....
RenumberInstanceUIDType2....
RenumberUID.reg
Reset4on1.reg
ResetFIFOOnNoDestination.R...
Set4on1.reg
SetDICOMLog.REG
SetFCRInfoAlineLeft.reg
SetFCRInfoAlineRight.reg
SetFIFOOnNoDestination.REG
SetSeriesUIDtoType0.reg
SetSeriesUIDtoType1.reg

FR5H0166.EPS

➔ A screen appears asking you to confirm addition to the registry.

(4) Click OK.


Registry Editor

Information in E:\Utility\SETDI~22.REG has been successfully entered into the registry.

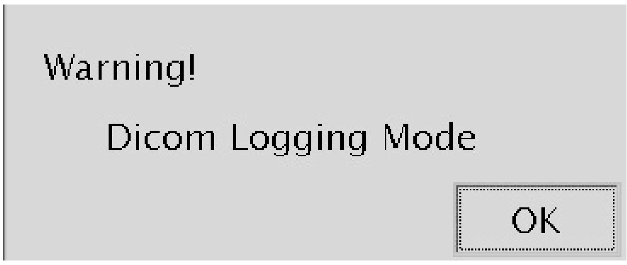
FR5H0168.EPS

➔ Registry values of the "HKEY_LOCAL_MACHINE/SOFTWARE/Fujifilm/HI_CX/CO/DICOM/LOG" folder will be set as follows.

- "loggging"=dword:00000001 ← Indicates that the log function is enabled.
- "level"=dword:00000003
- "information"=dword:0000001f

◆ *SUPPLEMENT* ◆

Once the log function has been enabled, a dialog like that shown below will open for confirmation purposes when the AP is started up. Click OK *to close the dialog. (Even if the dialog is not clicked, it will close automatically after a while.)*


Warning!

Dicom Logging Mode

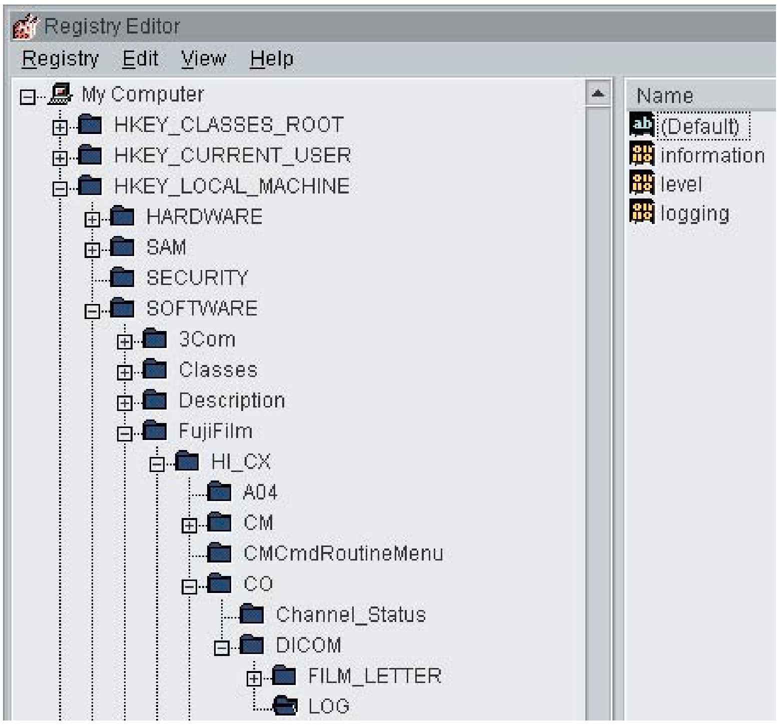
FR5H0177.EPS

■ Setting log levels

The log level setting procedure is presented below. The four log levels can be set using the DTK.

(1) Open the “HKEY_LOCAL_MACHINE/SOFTWARE/Fujifilm/HI_CX/CO/DICOM/LOG” folder on the registry.

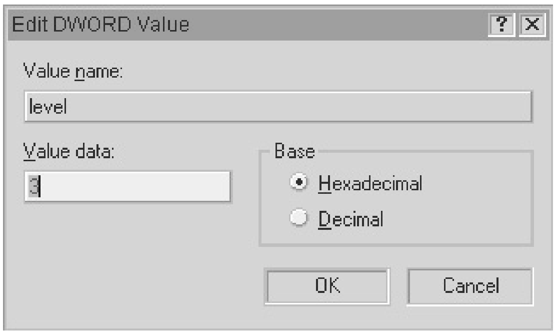
(2) Double-click level .


Registry Editor
Registry Edit View Help
My Computer
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HARDWARE
SAM
SECURITY
SOFTWARE
3Com
Classes
Description
FujiFilm
HI_CX
A04
CM
CMCmdRoutineMenu
CO
Channel_Status
DICOM
FILM_LETTER
LOG
Name
(Default)
information
level
logging

FR5H0169.EPS

➔ The “Edit DWORD Value” window opens.

(3) Enter a value in Value data: 3 and click OK .


Edit DWORD Value

Value name: level

Value data: 3

Base: ● Hexadecimal ○ Decimal

FR5H0170.EPS

The table below shows the relationship between registry values and log levels.

Data	DTK levels
1	DTK_LOG_AUDIT
3 (default)	DTK_LOG_ERROR
6	DTK_LOG_INFO
7	DTK_LOG_DEBUG
Other	DTK_LOG_ERROR

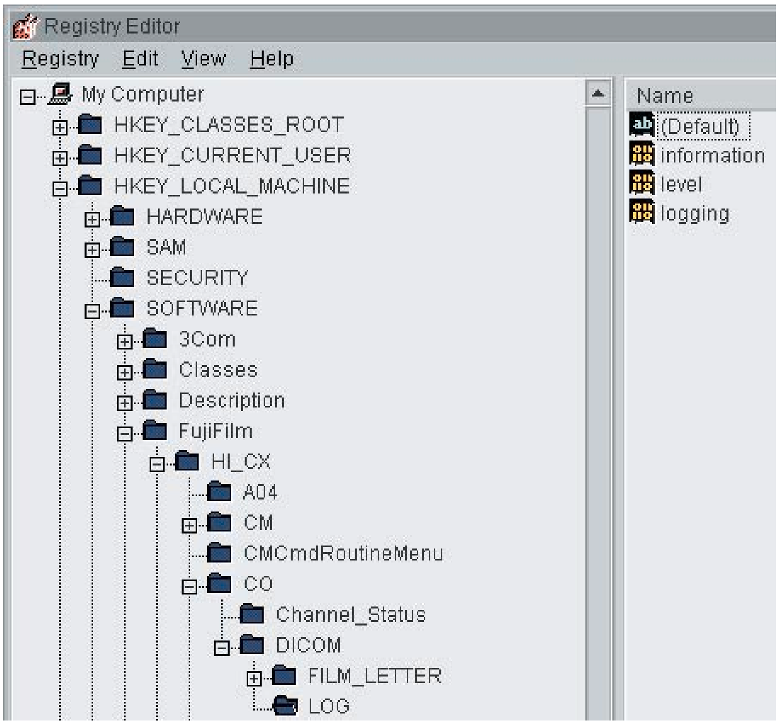
TR5H0180.EPS

■ Setting log information

Described herein is the procedure to be observed for setting log information. The five types of log information can be set using the DTK.
The multiple information types can be selected at the same time. Set them using a total sum of hexadecimal values that represent the multiple information types.

(1) Open the “HKEY_LOCAL_MACHINE/SOFTWARE/Fujifilm/HI_CX/CO/DICOM/LOG” folder on the registry.

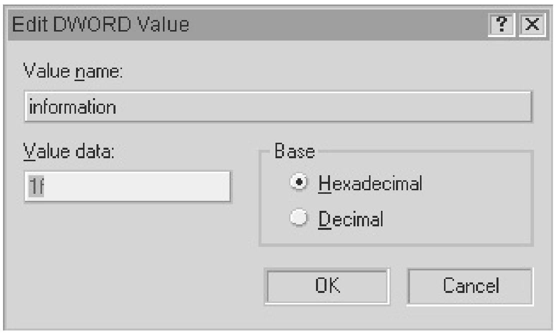
(2) Double-click information .


Registry Editor
Registry Edit View Help
My Computer
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HARDWARE
SAM
SECURITY
SOFTWARE
3Com
Classes
Description
FujiFilm
HI_CX
A04
CM
CMCmdRoutineMenu
CO
Channel_Status
DICOM
FILM_LETTER
LOG
Name
(Default)
information
level
logging

FR5H0169.EPS

➔ The “Edit DWORD Value” window opens.

(3) Enter a hexadecimal value in Value data: 1f and click OK .


Edit DWORD Value
?
OK
Cancel

Value name: information

Value data: 1f

Base
● Hexadecimal
○ Decimal

FR5H0171.EPS

The table below shows the relationship between registry values and acquired log information types.

Data	DTK information types
0×0001	DTK_DEBUG_PRINT_ASSOC
0×0002	DTK_DEBUG_PRINT_COMMAND
0×0004	DTK_DEBUG_PRINT_QUERY
0×0008	DTK_DEBUG_PRINT_STATE
0×0010	DTK_DEBUG_PRINT_OBJECT

TR5H0181.EPS

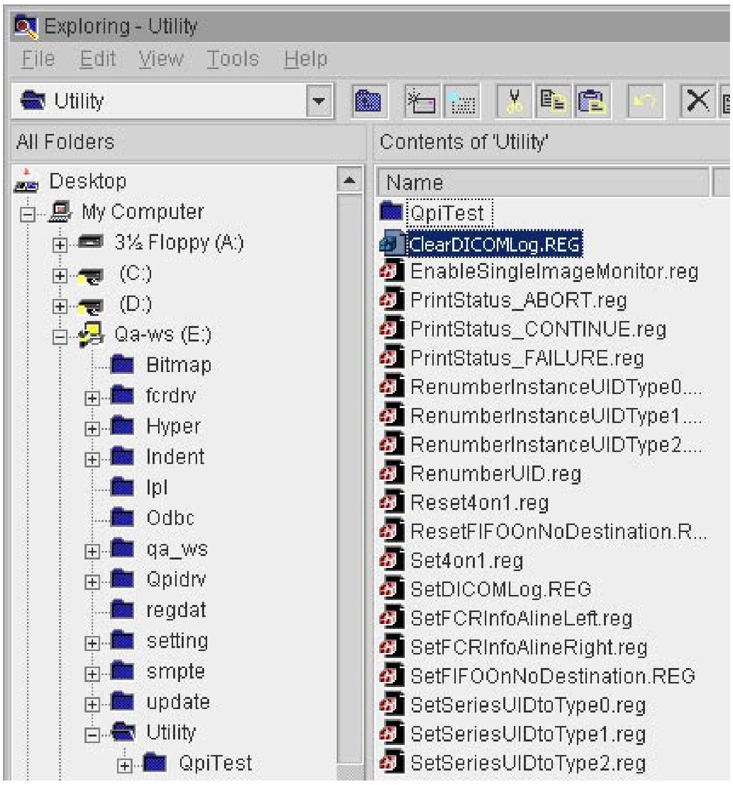
■ Disabling the log function

Presented below is the procedure to be observed for disabling the DICOM protocol log function.

(1) Insert the AP-CD into the CD-ROM drive.

(2) Open the “CD-ROM drive:\Utility” folder.

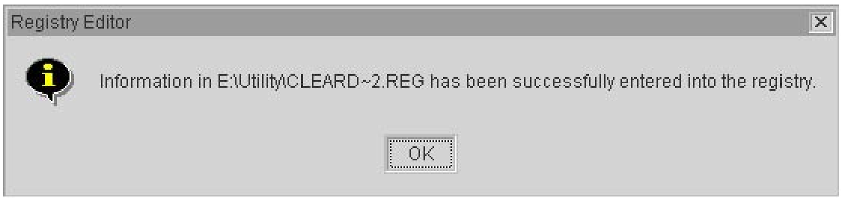
(3) Double-click ClearDICOMLog.REG.


Exploring - Utility
File Edit View Tools Help
Utility
All Folders
Contents of 'Utility'
Desktop
My Computer
3½ Floppy (A:)
(C:)
(D:)
Qa-ws (E:)
Bitmap
fcrdrv
Hyper
Indent
Ipl
Odbc
qa_ws
Qpidrv
regdat
setting
smpte
update
Utility
QpiTest
Name
QpiTest
ClearDICOMLog.REG
EnableSingleImageMonitor.reg
PrintStatus_ABORT.reg
PrintStatus_CONTINUE.reg
PrintStatus_FAILURE.reg
RenumberInstanceUIDType0....
RenumberInstanceUIDType1....
RenumberInstanceUIDType2....
RenumberUID.reg
Reset4on1.reg
ResetFIFOOnNoDestination.R...
Set4on1.reg
SetDICOMLog.REG
SetFCRInfoAlineLeft.reg
SetFCRInfoAlineRight.reg
SetFIFOOnNoDestination.REG
SetSeriesUIDtoType0.reg
SetSeriesUIDtoType1.reg
SetSeriesUIDtoType2.reg

FR5H0172.EPS

➔ A screen appears asking you to confirm addition to the registry.

(4) Click OK.


Registry Editor
OK

Information in E:\Utility\CLEARD~2.REG has been successfully entered into the registry.

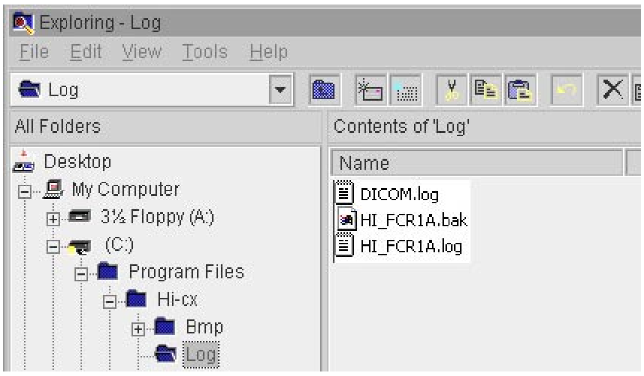
FR5H0174.EPS

➔ Registry values of the “HKEY_LOCAL_MACHINE/SOFTWARE/Fujifilm/HI_CX/CO/DICOM/LOG” folder will be set as follows.

- “logging”=dword:00000000← Indicates that the log function is disabled.

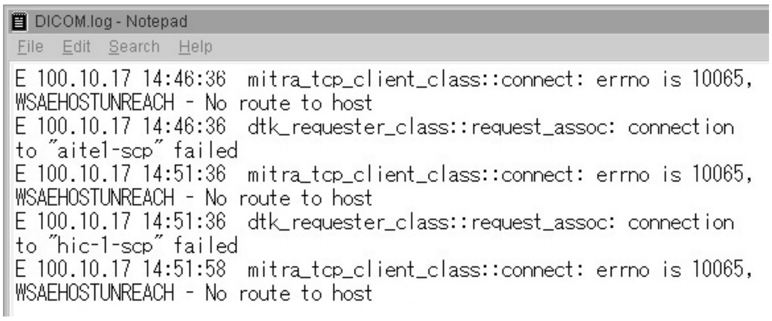
■ Checking output files

Output files according to the DICOM protocol log function are stored under the filename of “DICOM.log” in the LOG folder that is immediately below the installation directory (basically “C:\Program Files Hi-cx”).


Exploring - Log
File Edit View Tools Help
Log
All Folders
Contents of 'Log'
Desktop
My Computer
3½ Floppy (A:)
(C:)
Program Files
Hi-cx
Bmp
Log
Name
DICOM.log
HI_FCR1A.bak
HI_FCR1A.log

FR5H0175.EPS

To check the content, open the DICOM.log file using the memo (NotePad.exe). An opened file is shown below as an example.


DICOM.log - Notepad
File Edit Search Help

```
E 100.10.17 14:46:36  mitra_tcp_client_class::connect: errno is 10065,
WSAEHOSTUNREACH - No route to host
E 100.10.17 14:46:36  dtk_requester_class::request_assoc: connection
to "aitel-scp" failed
E 100.10.17 14:51:36  mitra_tcp_client_class::connect: errno is 10065,
WSAEHOSTUNREACH - No route to host
E 100.10.17 14:51:36  dtk_requester_class::request_assoc: connection
to "hic-1-scp" failed
E 100.10.17 14:51:58  mitra_tcp_client_class::connect: errno is 10065,
WSAEHOSTUNREACH - No route to host
```

FR5H0176.EPS

Information items (date and time, class, error no., detail information, etc.) processed by the DICOM protocols are recorded on each of the lines.

Appendix 6. OS Installation When Precision 410/420 is Used

In this section, the following abbreviations are used for convenience.

- Windows NT .... NT
- Video board driver .... VD
- QA-WS application software .... AP

Install Windows NT (NT) after formatting or replacing HDD.
When installed by overwriting, as all video board driver (VD) and QA-WS application (AP) files in the C drive (C:) will be deleted, install the VD and AP as well.

⚠ ***WARNING***

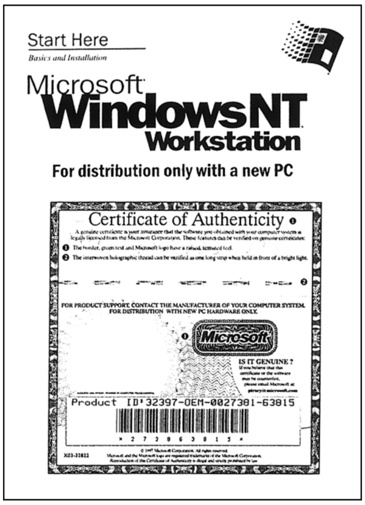
Image data may be deleted in the following cases when formatting the HDD or creating partitions;

- *When the system partition size is set to above 1024 MB*
- *When the image area partition size is deleted or formatted again*

Be sure to back up image data when formatting and creating partitions.

● The following will be required for the installation:

- Product ID (Number indicated on the cover of the "Windows NT For distribution only with a new PC" guide book.)
- Windows NT Workstation Setup Disks 1 to 3
- "Windows NT Workstation For distribution only with a new PC" CD -ROM
- Dell Workstation 410 SCSI Drivers for Windows NT 4.0 or Dell Workstation 420 SCSI Drivers for Windows NT 4.0 1 FD
- Windows NT Service Pack Installation CD-ROM
- VGA monitor



Start Here
Basics and Installation
Microsoft
Windows NT
Workstation
For distribution only with a new PC

Certificate of Authenticity ❶
A genuine certificate is your assurance that the software you obtained with your computer system is legally licensed from the Microsoft Corporation. These features can be verified on genuine certificates:
❶ The border, green text and Microsoft logo have a raised, textured feel.
❷ The interwoven holographic thread can be verified as one long strip when held in front of a bright light.

FOR PRODUCT SUPPORT, CONTACT THE MANUFACTURER OF YOUR COMPUTER SYSTEM.
FOR DISTRIBUTION WITH NEW PC HARDWARE ONLY.

IS IT GENUINE ?
If you believe that this certificate or the software may be counterfeit, please email Microsoft at piracy@microsoft.com

Product ID:32397-OEM-0027381-63815
* 2 7 3 8 6 3 8 1 5 *

X03-32822
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Reproduction of this Certificate of Authenticity is illegal and strictly prohibited by law.

Product ID

Microsoft
1-2 CPU Edition
Setup Disk 1
Windows NT® Series
1.44 MB
Version 4.0
Microsoft®
Windows NT®
Workstation
Operating System
For Distribution Only with a New PC
000-48481
DO NOT MAKE ILLEGAL COPIES
© 1985-1996 Microsoft Corporation. All rights reserved.
Setup Disk 2
Setup Disk 3

Windows NT Workstation Setup Disks

● Connecting the VGA Monitor (Tool)

As the 21" CRT monitor used normally has no compatibility with the VGA mode, it cannot be used for installing Windows NT and the VD.
Before beginning, connect the multi-scan VGA monitor (1600 x 1200 display or 1280x1024 display, horizontal 75 Hz, vertical 93 KHz refresh rate) to the connector for the 21" CRT monitor.

■ Installing Using Floppy Disks

- Key functions when installing Windows NT
  - <↑> and <↓> keys .... Use to move the cursors up and down.

◆ ***NOTE*** ◆

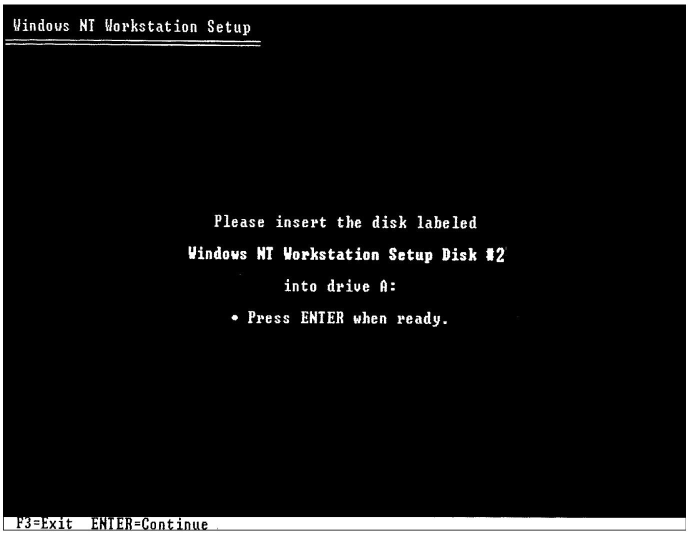
The message that instructs order of insertion of Setup Disks #2 and #3 can differ depending on the PC model or hardware configuration.

(1) With the computer turned OFF, insert the disk labeled "Windows NT Workstation Setup Disk #1" into drive A of the computer.
Then turn ON the computer.

◆ ***NOTE*** ◆

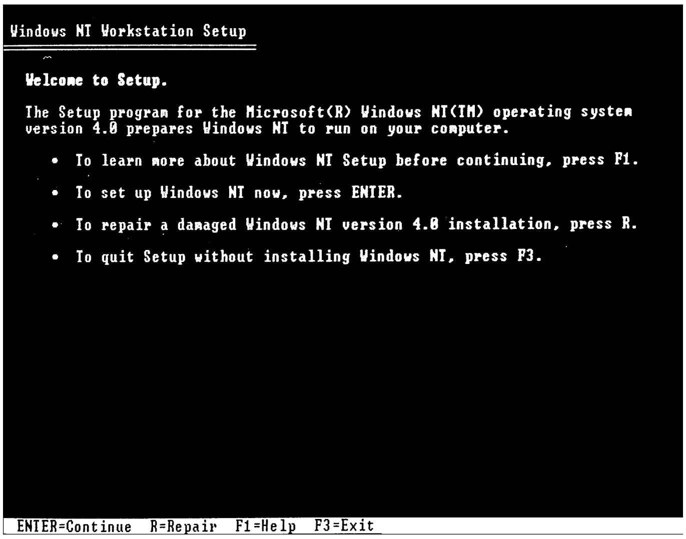
Be sure to turn OFF the power before starting up from "Windows NT Setup Disk 1".

(2) The computer starts and reads the contents of "Windows NT Workstation Setup Disk #1", and the following message appears about 1 1/2 minutes later.
Remove disk #1, insert disk #2, and press the <Enter> key.



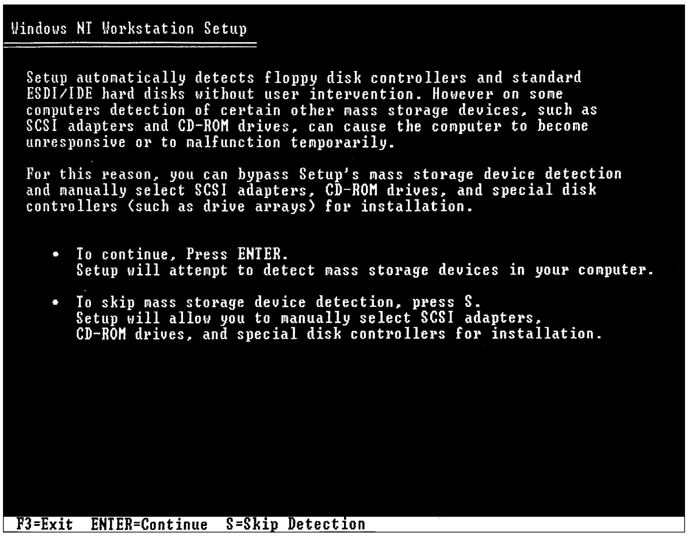
```
Windows NT Workstation Setup

                Please insert the disk labeled
            Windows NT Workstation Setup Disk #2
                        into drive A:
                  • Press ENTER when ready.

F3=Exit  ENTER=Continue
```

(3) The "Welcome to Setup" screen appears about 2 minutes later.
Press the <Enter> key to start setup.



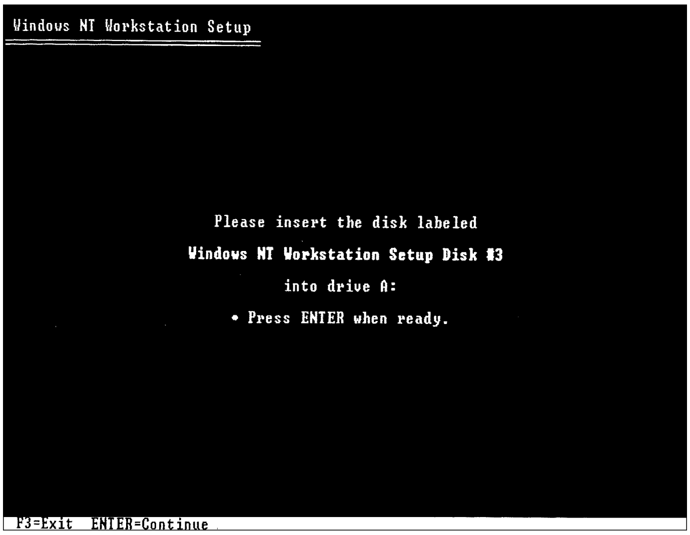
```
Windows NT Workstation Setup

 Welcome to Setup.

 The Setup program for the Microsoft(R) Windows NT(TM) operating system
 version 4.0 prepares Windows NT to run on your computer.

   • To learn more about Windows NT Setup before continuing, press F1.

   • To set up Windows NT now, press ENTER.

   • To repair a damaged Windows NT version 4.0 installation, press R.

   • To quit Setup without installing Windows NT, press F3.

ENTER=Continue  R=Repair  F1=Help  F3=Exit
```

(4) Press the <Enter> key at the following screen for automatic detection of mass storage devices (CD-ROM, HDD, etc.).



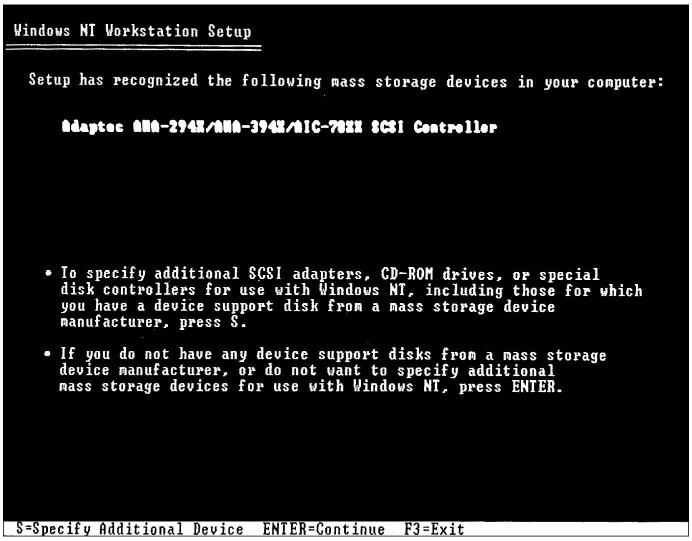
```
Windows NT Workstation Setup
════════════════════════════

  Setup automatically detects floppy disk controllers and standard
  ESDI/IDE hard disks without user intervention. However on some
  computers detection of certain other mass storage devices, such as
  SCSI adapters and CD-ROM drives, can cause the computer to become
  unresponsive or to malfunction temporarily.

  For this reason, you can bypass Setup's mass storage device detection
  and manually select SCSI adapters, CD-ROM drives, and special disk
  controllers (such as drive arrays) for installation.


      •  To continue, Press ENTER.
         Setup will attempt to detect mass storage devices in your computer.

      •  To skip mass storage device detection, press S.
         Setup will allow you to manually select SCSI adapters,
         CD-ROM drives, and special disk controllers for installation.

 F3=Exit  ENTER=Continue  S=Skip Detection
```

(5) The following message appears.
Remove disk #2, insert disk #3, and press the<Enter> key.



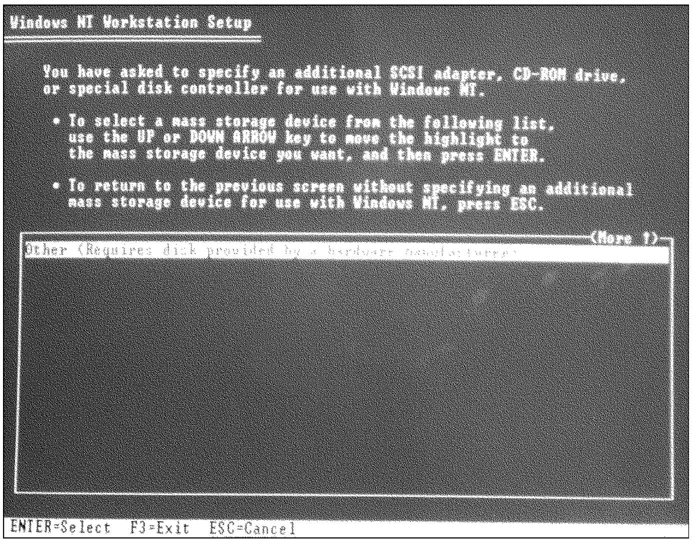
```
Windows NT Workstation Setup
════════════════════════════

                       Please insert the disk labeled

                   Windows NT Workstation Setup Disk #3

                              into drive A:

                         • Press ENTER when ready.

 F3=Exit  ENTER=Continue
```

(6) Details of the storage devices detected will be displayed about 1 minute later.
Press the <S> key to add the device.



```
Windows NT Workstation Setup
════════════════════════════

  Setup has recognized the following mass storage devices in your computer:

      Adaptec AHA-294X/AHA-394X/AIC-78XX SCSI Controller


    • To specify additional SCSI adapters, CD-ROM drives, or special
      disk controllers for use with Windows NT, including those for which
      you have a device support disk from a mass storage device
      manufacturer, press S.

    • If you do not have any device support disks from a mass storage
      device manufacturer, or do not want to specify additional
      mass storage devices for use with Windows NT, press ENTER.

 S=Specify Additional Device  ENTER=Continue  F3=Exit
```

(7) Select "Other" from the following screen and press the <Enter> key.

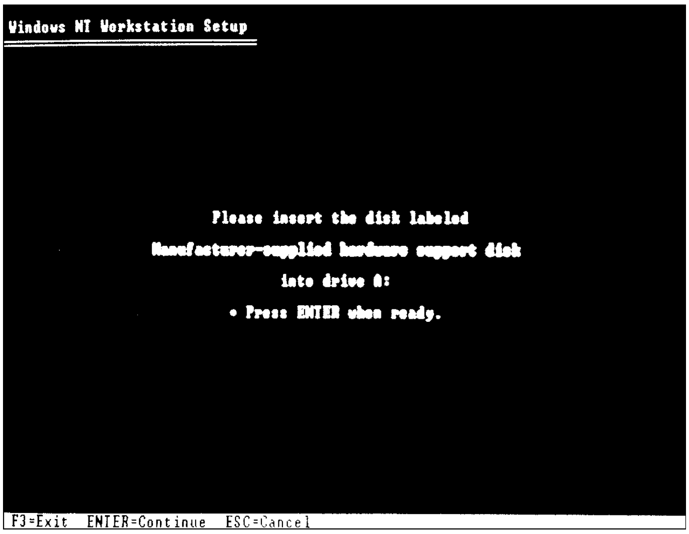


```
Windows NT Workstation Setup

  You have asked to specify an additional SCSI adapter, CD-ROM drive,
  or special disk controller for use with Windows NT.

   • To select a mass storage device from the following list,
     use the UP or DOWN ARROW key to move the highlight to
     the mass storage device you want, and then press ENTER.

   • To return to the previous screen without specifying an additional
     mass storage device for use with Windows NT, press ESC.

 Other (Requires disk provided by a hardware manufacturer)    <More ↑>

ENTER=Select  F3=Exit  ESC=Cancel
```

(8) Remove the "Windows NT Setup Disk 3", insert the "Dell Workstation 410 SCSI Drivers for Windows NT4.0" disk, then press the <Enter> key.

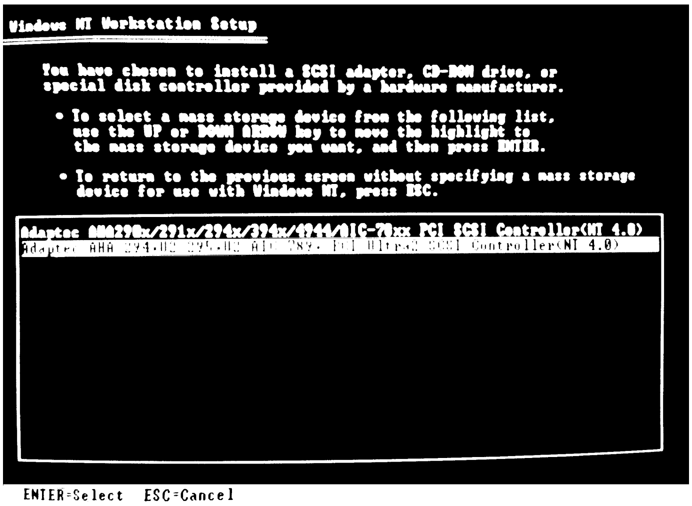
◆ *NOTE* ◆

When Precision 420 is used, be sure to use “Dell Workstation 420 SCSI Drivers for Windows NT4.0.”



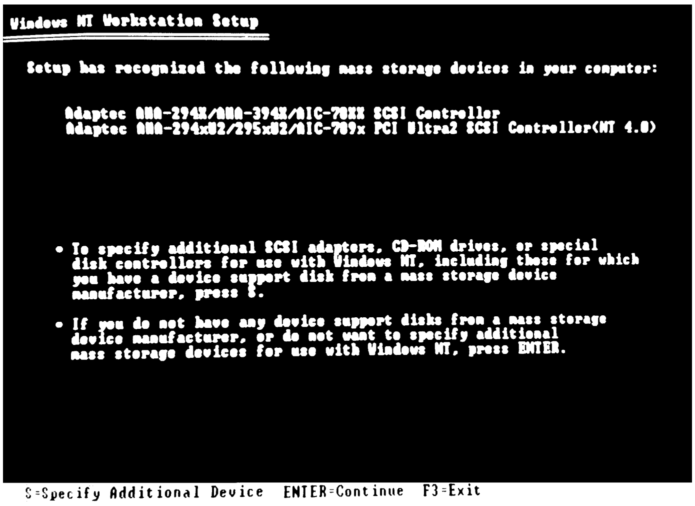
```
Windows NT Workstation Setup

              Please insert the disk labeled
         Manufacturer-supplied hardware support disk
                      into drive A:
                 • Press ENTER when ready.

F3=Exit  ENTER=Continue  ESC=Cancel
```

(9) At the following screen, select "Adaptec AHA-294XU2/295XU2/AIC-789X PCI Ultra2 SCSI Controller (NT4.0)", and press the <Enter> key.



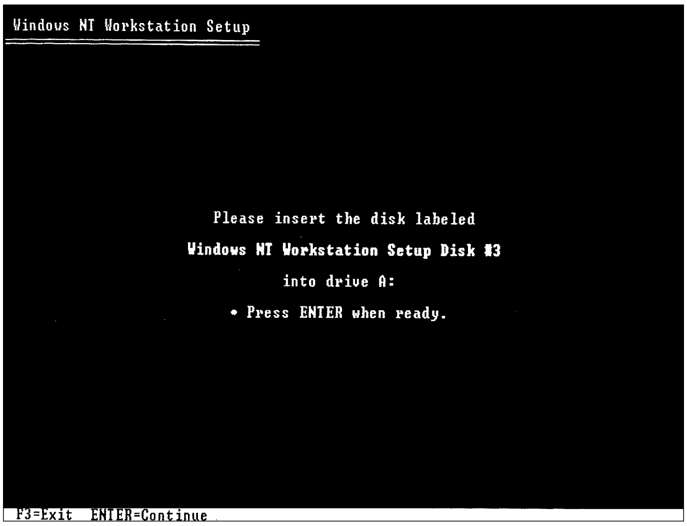
```
Windows NT Workstation Setup

You have chosen to install a SCSI adapter, CD-ROM drive, or
special disk controller provided by a hardware manufacturer.

  • To select a mass storage device from the following list,
    use the UP or DOWN ARROW key to move the highlight to
    the mass storage device you want, and then press ENTER.

  • To return to the previous screen without specifying a mass storage
    device for use with Windows NT, press ESC.

Adaptec AHA290x/291x/294x/394x/4944/AIC-78xx PCI SCSI Controller(NT 4.0)
Adaptec AHA-294xU2/295xU2/AIC-789x PCI Ultra2 SCSI Controller(NT 4.0)

ENTER=Select  ESC=Cancel
```

(10) The following screen appears when installation completes. Check that "Adaptec AHA-294XU2/295XU2/AIC-789X PCI Ultra2 SCSI Controller (NT4.0)" was detected, and press the <Enter> key.



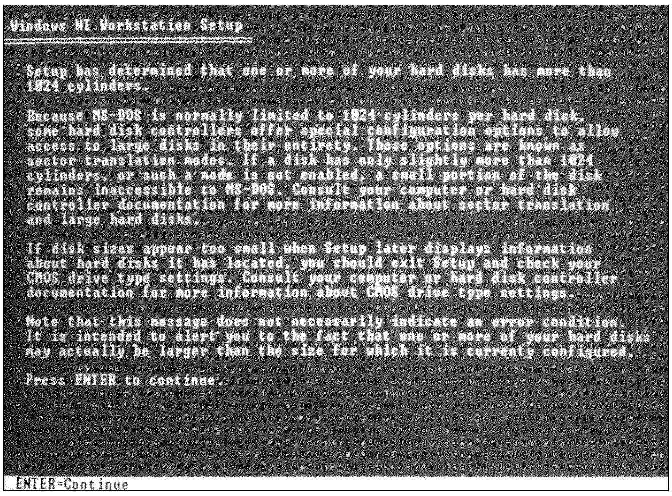
```
Windows NT Workstation Setup

Setup has recognized the following mass storage devices in your computer:

    Adaptec AHA-294X/AHA-394X/AIC-78XX SCSI Controller
    Adaptec AHA-294xU2/295xU2/AIC-789x PCI Ultra2 SCSI Controller(NT 4.0)

  • To specify additional SCSI adapters, CD-ROM drives, or special
    disk controllers for use with Windows NT, including those for which
    you have a device support disk from a mass storage device
    manufacturer, press S.

  • If you do not have any device support disks from a mass storage
    device manufacturer, or do not want to specify additional
    mass storage devices for use with Windows NT, press ENTER.

S=Specify Additional Device  ENTER=Continue  F3=Exit
```

(11) When the following screen appears, insert the "Windows NT Setup Disk 3", and press the <Enter> key.



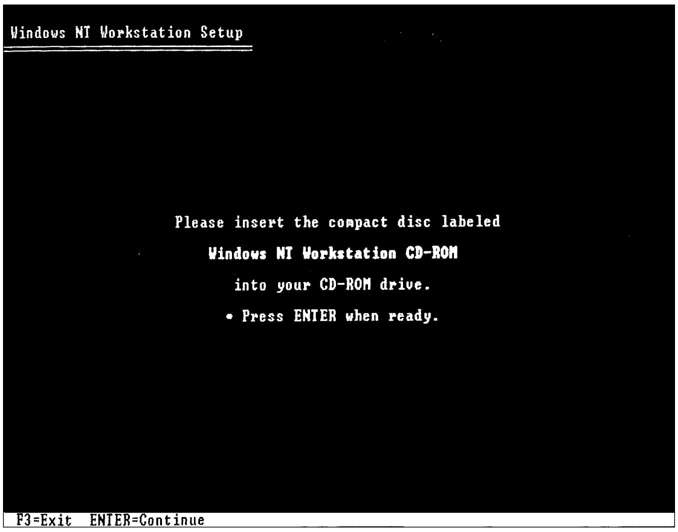
```
Windows NT Workstation Setup

                    Please insert the disk labeled
               Windows NT Workstation Setup Disk #3
                            into drive A:
                      • Press ENTER when ready.

F3=Exit  ENTER=Continue
```

(12) When the following screen appears, press the <Enter> key.



```
Windows NT Workstation Setup

  Setup has determined that one or more of your hard disks has more than
  1024 cylinders.

  Because MS-DOS is normally limited to 1024 cylinders per hard disk,
  some hard disk controllers offer special configuration options to allow
  access to large disks in their entirety. These options are known as
  sector translation modes. If a disk has only slightly more than 1024
  cylinders, or such a mode is not enabled, a small portion of the disk
  remains inaccessible to MS-DOS. Consult your computer or hard disk
  controller documentation for more information about sector translation
  and large hard disks.

  If disk sizes appear too small when Setup later displays information
  about hard disks it has located, you should exit Setup and check your
  CMOS drive type settings. Consult your computer or hard disk controller
  documentation for more information about CMOS drive type settings.

  Note that this message does not necessarily indicate an error condition.
  It is intended to alert you to the fact that one or more of your hard disks
  may actually be larger than the size for which it is currenty configured.

  Press ENTER to continue.

 ENTER=Continue
```

(13) The drivers are installed, and the following message appears.
Insert the "Windows NT Workstation CD-ROM Disk 1", and press the <Enter> key.



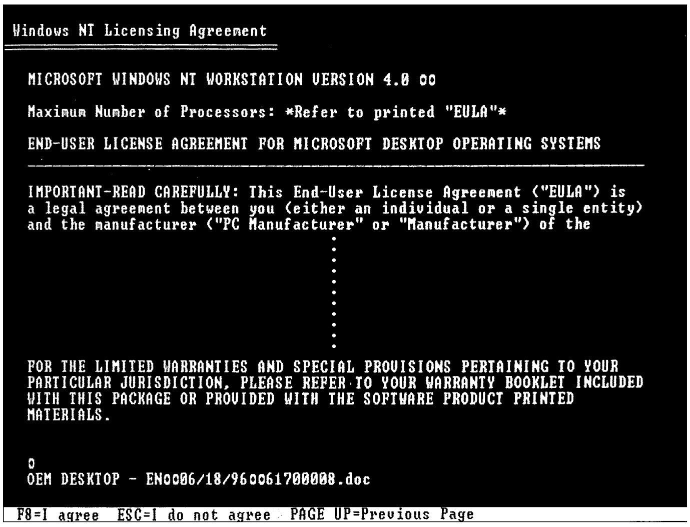
```
Windows NT Workstation Setup


                 Please insert the compact disc labeled

                     Windows NT Workstation CD-ROM

                          into your CD-ROM drive.

                         • Press ENTER when ready.


 F3=Exit  ENTER=Continue
```

■ Installing Using the CD-ROM

(1) Read the Windows NT License Agreement screen that appears, scrolling it down using the <Page Down> key. At the end, press the <F8> key to agree with the contents.

◆ *NOTE* ◆

Press the <F8> key only at the end of the screen.

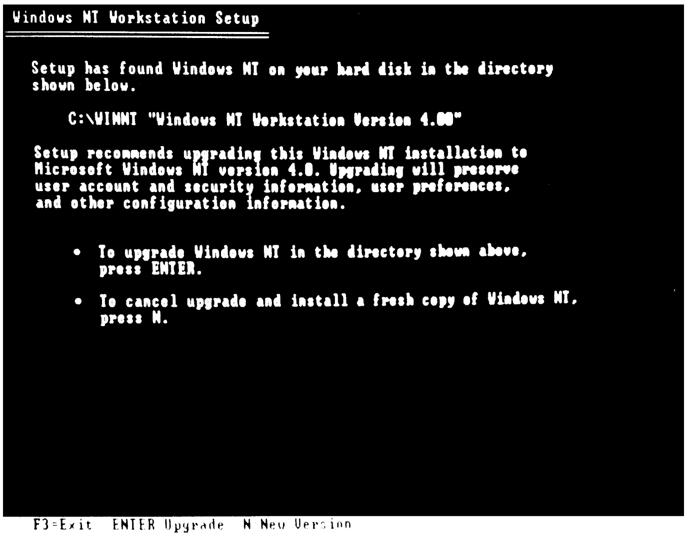


```
Windows NT Licensing Agreement

  MICROSOFT WINDOWS NT WORKSTATION VERSION 4.0 OO

  Maximum Number of Processors: *Refer to printed "EULA"*

  END-USER LICENSE AGREEMENT FOR MICROSOFT DESKTOP OPERATING SYSTEMS

  IMPORTANT-READ CAREFULLY: This End-User License Agreement ("EULA") is
  a legal agreement between you (either an individual or a single entity)
  and the manufacturer ("PC Manufacturer" or "Manufacturer") of the
                                          .
                                          .
                                          .
                                          .
                                          .
                                          .
                                          .
                                          .

  FOR THE LIMITED WARRANTIES AND SPECIAL PROVISIONS PERTAINING TO YOUR
  PARTICULAR JURISDICTION, PLEASE REFER TO YOUR WARRANTY BOOKLET INCLUDED
  WITH THIS PACKAGE OR PROVIDED WITH THE SOFTWARE PRODUCT PRINTED
  MATERIALS.

  0
  OEM DESKTOP - EN0006/18/960061700008.doc
 F8=I agree  ESC=I do not agree  PAGE UP=Previous Page
```

(2) At the following screen, press the <N> key to install NT .

◆ *NOTE* ◆

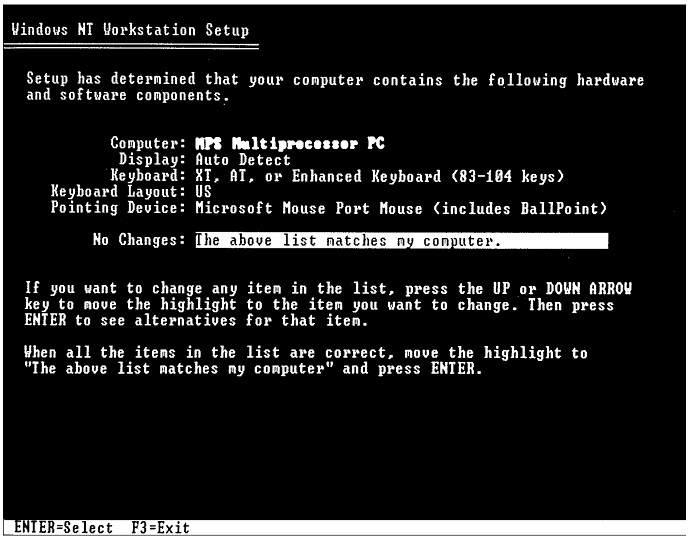
This screen will not appear if NT is not installed in the hard disk.
In such cases, proceed onto the next step.



```
Windows NT Workstation Setup

  Setup has found Windows NT on your hard disk in the directory
  shown below.

      C:\WINNT "Windows NT Workstation Version 4.00"

  Setup recommends upgrading this Windows NT installation to
  Microsoft Windows NT version 4.0. Upgrading will preserve
  user account and security information, user preferences,
  and other configuration information.

      •  To upgrade Windows NT in the directory shown above,
         press ENTER.

      •  To cancel upgrade and install a fresh copy of Windows NT,
         press N.

  F3=Exit  ENTER Upgrade  N New Version
```

Steps (3) and (4) have been left blank intentionally.

(5) The next screen lists the detected software and hardware.
If correct, press the <Enter> key.
If incorrect, refer to the explanation on the screen and set again.



```
Windows NT Workstation Setup
════════════════════════════

  Setup has determined that your computer contains the following hardware
  and software components.

          Computer: MPS Multiprocessor PC
           Display: Auto Detect
          Keyboard: XT, AT, or Enhanced Keyboard (83-104 keys)
   Keyboard Layout: US
   Pointing Device: Microsoft Mouse Port Mouse (includes BallPoint)

        No Changes: The above list matches my computer.

  If you want to change any item in the list, press the UP or DOWN ARROW
  key to move the highlight to the item you want to change. Then press
  ENTER to see alternatives for that item.

  When all the items in the list are correct, move the highlight to
  "The above list matches my computer" and press ENTER.

 ENTER=Select  F3=Exit
```

(6) At the following screen, press the <D> key to delete all default partitions.

◆ *NOTE* ◆

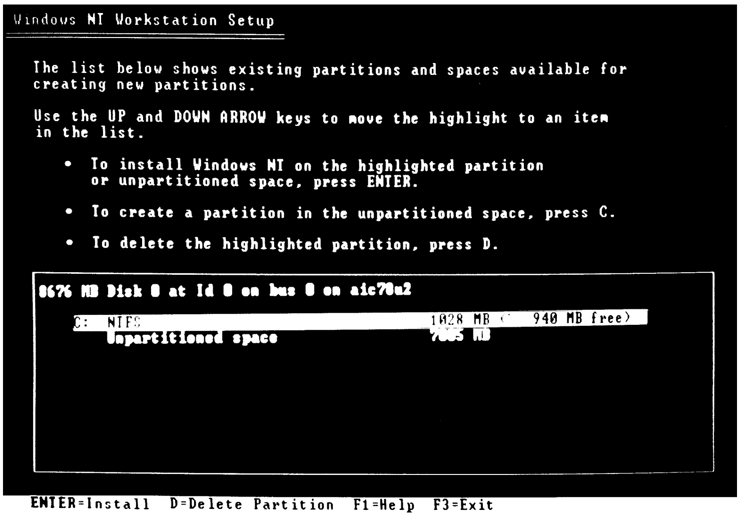
Delete all default partitions to create new ones.

⚠ *WARNING*

Image data may be deleted in the following cases when formatting the HDD or creating partitions;

- *When the system partition size is set to above 1024MB*
- *When the image area partition size is deleted or formatted again*

Be sure to back up image data when formatting and creating partitions.



```
Windows NT Workstation Setup
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  The list below shows existing partitions and spaces available for
  creating new partitions.

  Use the UP and DOWN ARROW keys to move the highlight to an item
  in the list.

      •  To install Windows NT on the highlighted partition
         or unpartitioned space, press ENTER.

      •  To create a partition in the unpartitioned space, press C.

      •  To delete the highlighted partition, press D.

  8676 MB Disk 0 at Id 0 on bus 0 on aic78u2

      C:  NTFS                          1028 MB (   940 MB free)
          Unpartitioned space           7665 MB

  ENTER=Install  D=Delete Partition  F1=Help  F3=Exit
```
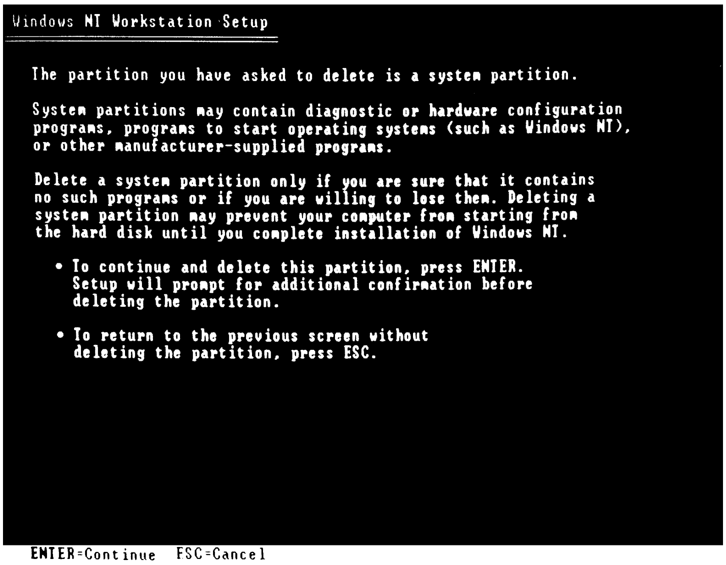

(7) At the following screen, press the <Enter> key.

◆ NOTE ◆

This screen will be displayed only when deleting the system partition.



```
Windows NT Workstation Setup
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  The partition you have asked to delete is a system partition.

  System partitions may contain diagnostic or hardware configuration
  programs, programs to start operating systems (such as Windows NT),
  or other manufacturer-supplied programs.

  Delete a system partition only if you are sure that it contains
  no such programs or if you are willing to lose them. Deleting a
  system partition may prevent your computer from starting from
  the hard disk until you complete installation of Windows NT.

     • To continue and delete this partition, press ENTER.
       Setup will prompt for additional confirmation before
       deleting the partition.

     • To return to the previous screen without
       deleting the partition, press ESC.

  ENTER=Continue  ESC=Cancel
```
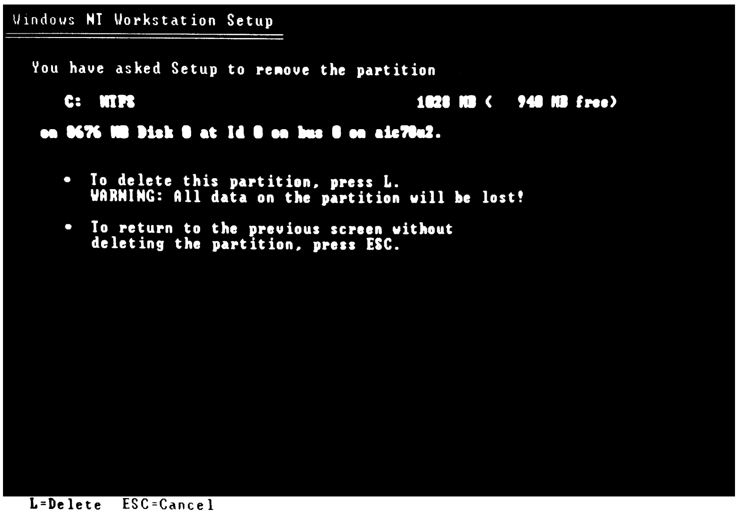

(8) Press the <L> key to delete the partition.

Delete remaining partitions using the same procedures as those described above.



```
Windows NT Workstation Setup
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  You have asked Setup to remove the partition

     C:  NTFS                              1028 MB (   940 MB free)

   on 8676 MB Disk 0 at Id 0 on bus 0 on aic78u2.

      •  To delete this partition, press L.
         WARNING: All data on the partition will be lost!

      •  To return to the previous screen without
         deleting the partition, press ESC.

  L=Delete  ESC=Cancel
```
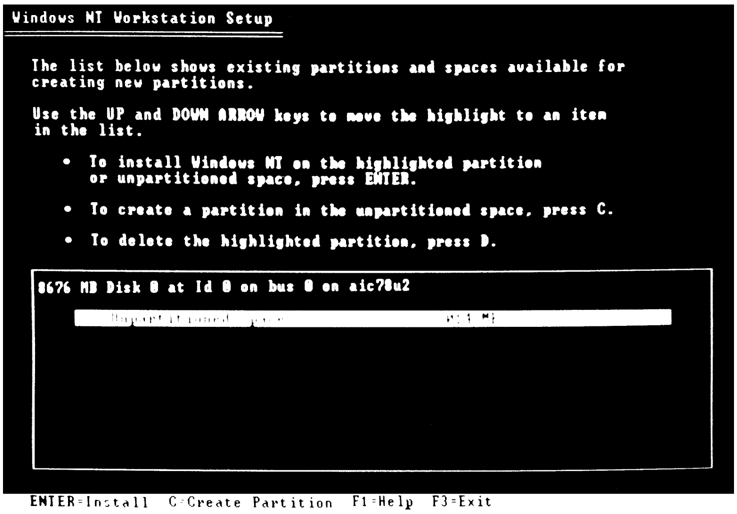

(9) To create the partition to install Windows NT, move the cursor to "Unpartitioned space:xxxx" , and press the <C> key.



```
Windows NT Workstation Setup
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  The list below shows existing partitions and spaces available for
  creating new partitions.

  Use the UP and DOWN ARROW keys to move the highlight to an item
  in the list.

     •  To install Windows NT on the highlighted partition
        or unpartitioned space, press ENTER.

     •  To create a partition in the unpartitioned space, press C.

     •  To delete the highlighted partition, press D.

  8676 MB Disk 0 at Id 0 on bus 0 on aic78u2

       Unpartitioned space                         [illegible] MB

ENTER=Install  C=Create Partition  F1=Help  F3=Exit
```
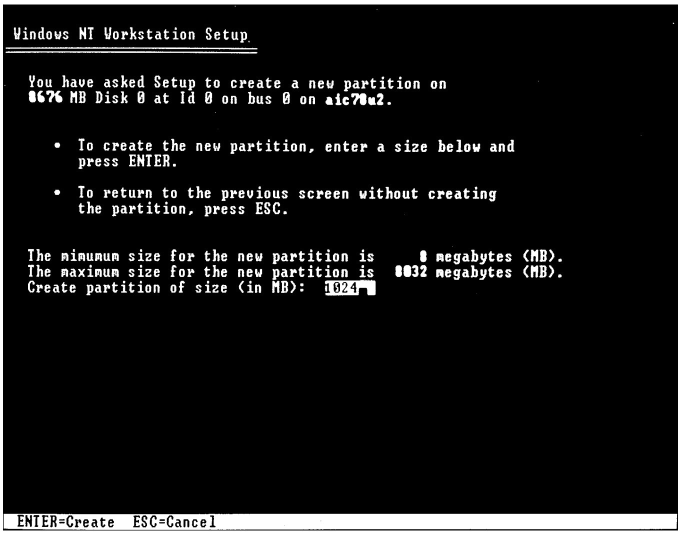

(10) Use the <Back space> key to clear the default value, then set the system partition size to 1024MB, and press the <Enter> key.



```
Windows NT Workstation Setup
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  You have asked Setup to create a new partition on
  8676 MB Disk 0 at Id 0 on bus 0 on aic78u2.

     •  To create the new partition, enter a size below and
        press ENTER.

     •  To return to the previous screen without creating
        the partition, press ESC.

  The mimumum size for the new partition is     8 megabytes (MB).
  The maximum size for the new partition is  8032 megabytes (MB).
  Create partition of size (in MB):  1024

ENTER=Create  ESC=Cancel
```

⚠ *WARNING*

Image data may be deleted in the following cases when formatting the HDD or creating partitions;

- *When the system partition size is set to above 1024 MB*
- *When the image area partition size is deleted or formatted again*

Be sure to back up image data when formatting and creating partitions.

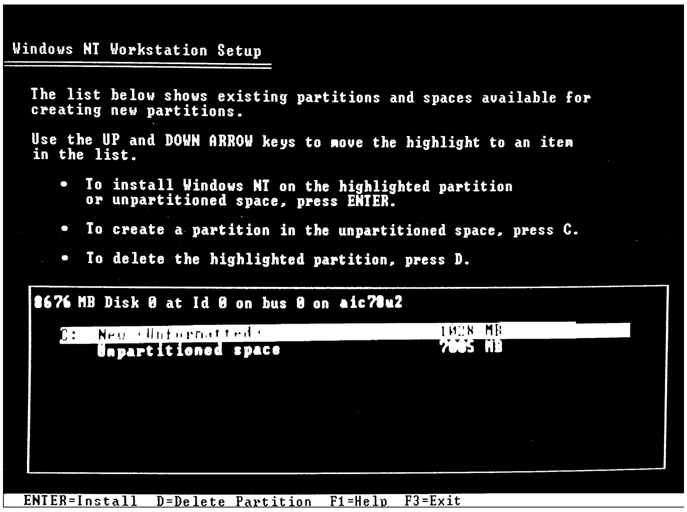
◆ *NOTE* ◆

NT, VD, and AP are installed in the system partition (C:).

◆ *REFERENCE* ◆

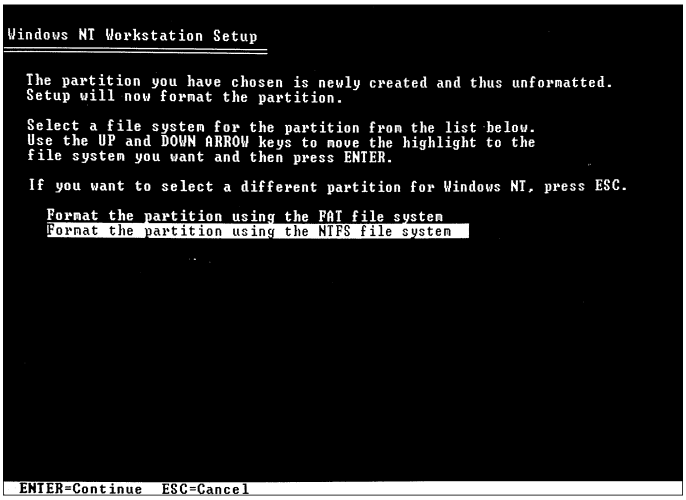
To use the ten-key for entering values, press the <Num Lock> key to enable use.

(11) At the screen, select the partition C: to install Windows NT. Check that C: New (Unformattted) 1028MB is selected and press the <Enter>key.



```
Windows NT Workstation Setup

  The list below shows existing partitions and spaces available for
  creating new partitions.

  Use the UP and DOWN ARROW keys to move the highlight to an item
  in the list.

     •  To install Windows NT on the highlighted partition
        or unpartitioned space, press ENTER.

     •  To create a partition in the unpartitioned space, press C.

     •  To delete the highlighted partition, press D.

  8676 MB Disk 0 at Id 0 on bus 0 on aic78u2

     C:  New (Unformatted)                         1028 MB
         Unpartitioned space                       7645 MB

 ENTER=Install  D=Delete Partition  F1=Help  F3=Exit
```

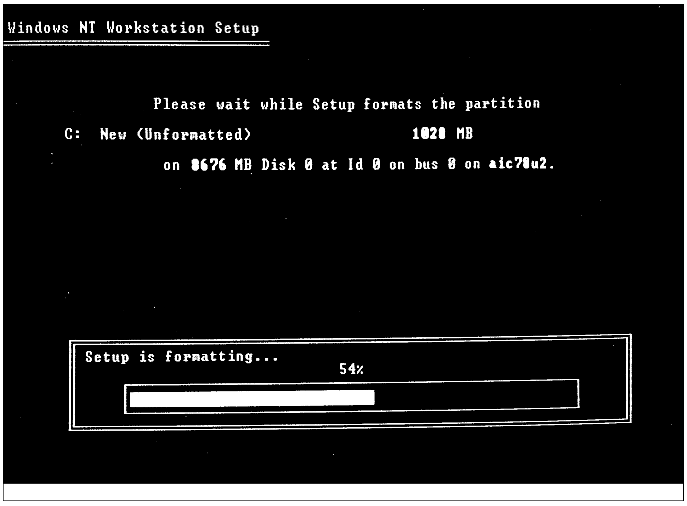
(12) Select "Format the partition using the NTFS file system" and press the <Enter> key to start formatting.



```
Windows NT Workstation Setup

  The partition you have chosen is newly created and thus unformatted.
  Setup will now format the partition.

  Select a file system for the partition from the list below.
  Use the UP and DOWN ARROW keys to move the highlight to the
  file system you want and then press ENTER.

  If you want to select a different partition for Windows NT, press ESC.

    Format the partition using the FAT file system
    Format the partition using the NTFS file system

 ENTER=Continue  ESC=Cancel
```

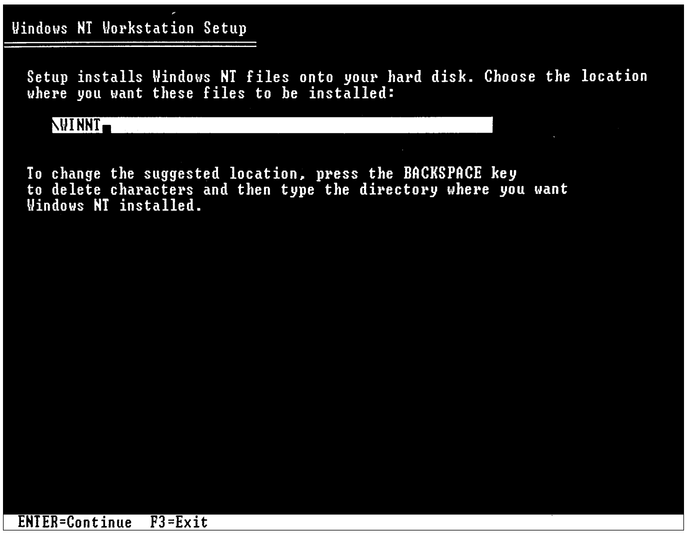
◆ NOTE ◆

Do not select drive D (image area partition).



```
Windows NT Workstation Setup

            Please wait while Setup formats the partition

     C:  New (Unformatted)                    1028 MB

              on 8676 MB Disk 0 at Id 0 on bus 0 on aic78u2.

      Setup is formatting...
                                  54%
```

(13) When NTFS formatting completes, the following screen appears.
Check that Windows NT has been installed in "\WINNT" , and press the <Enter> key.



```
Windows NT Workstation Setup
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  Setup installs Windows NT files onto your hard disk. Choose the location
  where you want these files to be installed:

     \WINNT

  To change the suggested location, press the BACKSPACE key
  to delete characters and then type the directory where you want
  Windows NT installed.

 ENTER=Continue  F3=Exit
```
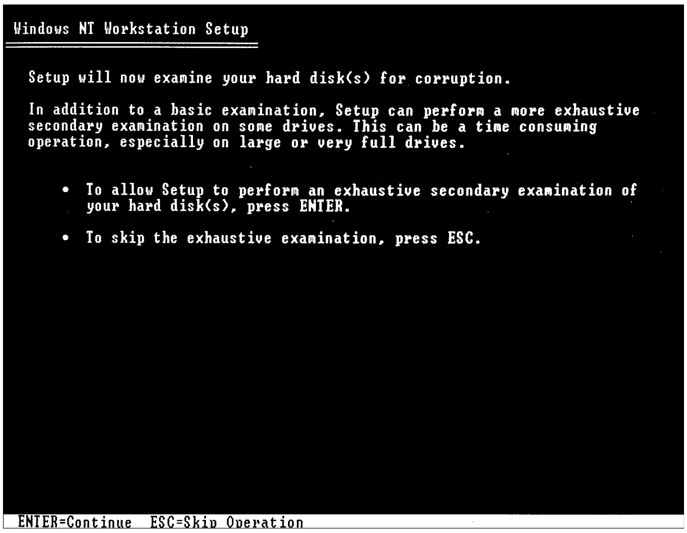

(14) At the following screen, Setup will examine the HDD for corruption by two methods-basic examination and secondary examination.
Press the <Enter> key to execute the secondary examination.



```
Windows NT Workstation Setup
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  Setup will now examine your hard disk(s) for corruption.

  In addition to a basic examination, Setup can perform a more exhaustive
  secondary examination on some drives. This can be a time consuming
  operation, especially on large or very full drives.

      •  To allow Setup to perform an exhaustive secondary examination of
         your hard disk(s), press ENTER.

      •  To skip the exhaustive examination, press ESC.

 ENTER=Continue  ESC=Skip Operation
```
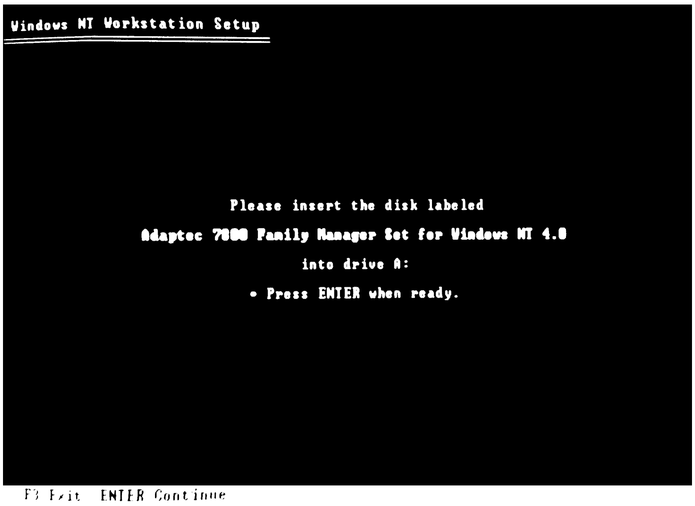

(15) At the following screen, insert the "Dell Workstation 410 SCSI Drivers for Windows NT 4.0" disk, and press the <Enter> key.

◆ NOTE ◆

- *Be sure to insert the "Dell Workstation 410 SCSI Drivers for Windows NT 4.0" disk even though "Adaptec 7800 Family Manager Set for Windows NT 4.0" is displayed on the window.*
- *When Precision 420 is used, be sure to use "Dell Workstation 420 SCSI Drivers for Windows NT4.0."*



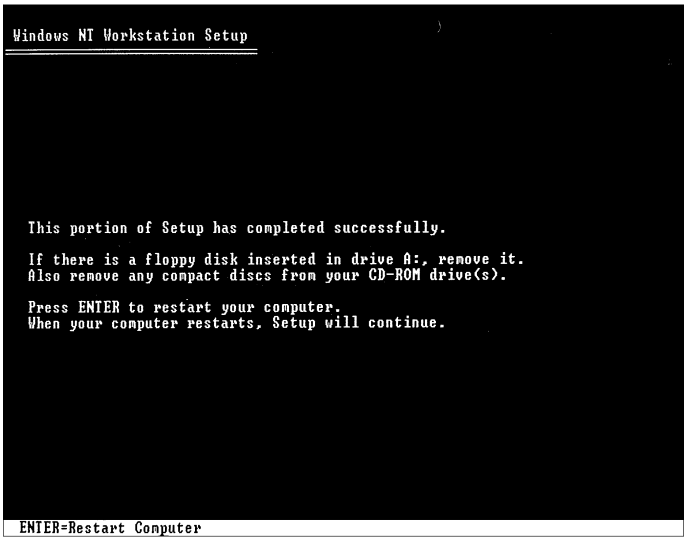
```
Windows NT Workstation Setup

                Please insert the disk labeled
    Adaptec 7800 Family Manager Set for Windows NT 4.0
                       into drive A:
                  • Press ENTER when ready.

F3 Exit  ENTER Continue
```

(16) When Setup completes the examination, the compressed file of the CD-ROM is depressed and copied to the HD.

(17) When the following message appears, remove the CD-ROM and floppy disk, and press the <Enter> key to restart the computer.

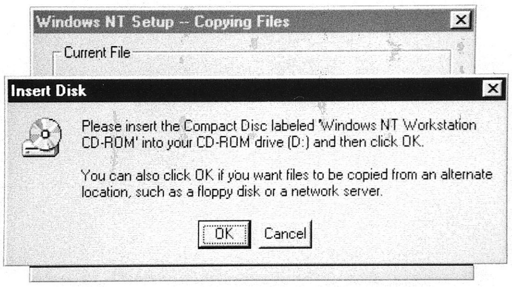
◆ NOTE ◆

Remove the floppy disk properly or errors may occur and disable restart. If this occurs, remove the floppy disk, and press the <Ctrl> <Alt>, and <Delete> keys together to restart.



```
Windows NT Workstation Setup

  This portion of Setup has completed successfully.

  If there is a floppy disk inserted in drive A:, remove it.
  Also remove any compact discs from your CD-ROM drive(s).

  Press ENTER to restart your computer.
  When your computer restarts, Setup will continue.

ENTER=Restart Computer
```

(18) When the computer restarts, the "Insert Disk" screen appears. Insert the "Windows NT Workstation CD-ROM Disc 1" in the CD-ROM drive, check that the CD-ROM drive access lamp goes off, and click [OK].


Windows NT Setup -- Copying Files
Current File
Insert Disk

Please insert the Compact Disc labeled 'Windows NT Workstation CD-ROM' into your CD-ROM drive (D:) and then click OK.

You can also click OK if you want files to be copied from an alternate location, such as a floppy disk or a network server.

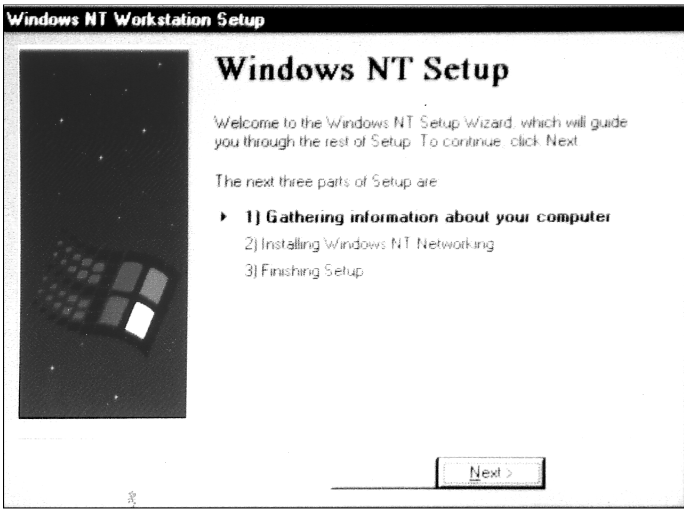
OK
Cancel

■ Gathering Information on the Computer

(1) The "Windows NT Setup" screen appears.
Click [Next>].

◆ NOTE ◆

- *Settings hereafter will be proceeded by the Windows NT Wizard.*
- *The mouse can be used for selecting places to be entered and items.*



Windows NT Workstation Setup

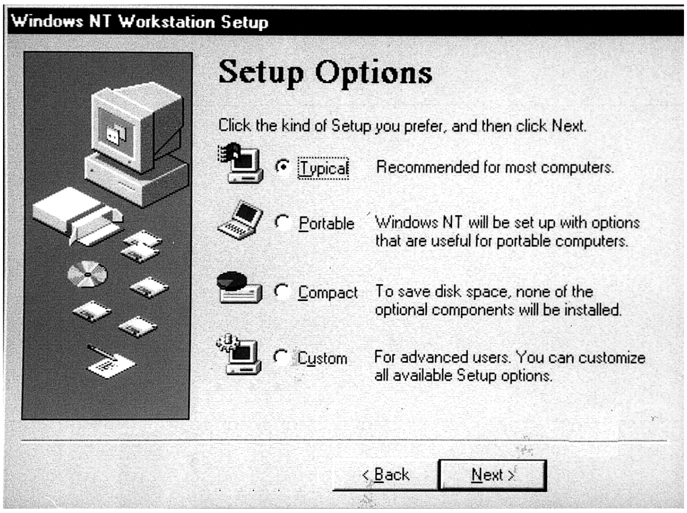
Windows NT Setup

Welcome to the Windows NT Setup Wizard, which will guide you through the rest of Setup. To continue, click Next.

The next three parts of Setup are:

▸ **1) Gathering information about your computer**
2) Installing Windows NT Networking
3) Finishing Setup

(2) At the "Setup Options" screen, click "Typical" and then [Next>].



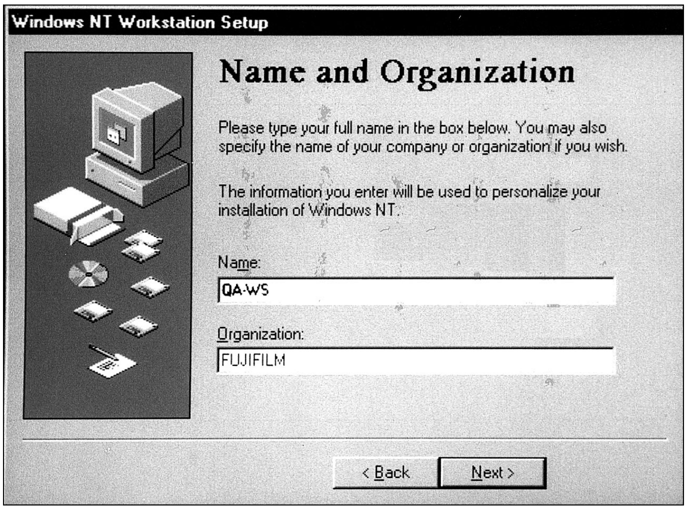
Windows NT Workstation Setup

Setup Options

Click the kind of Setup you prefer, and then click Next.

● Typical	Recommended for most computers.
○ Portable	Windows NT will be set up with options that are useful for portable computers.
○ Compact	To save disk space, none of the optional components will be installed.
○ Custom	For advanced users. You can customize all available Setup options.

(3) At the "Name and Organization" screen, enter "QA-WS" in the "Name" box and "FUJIFILM" in the "Organization" box, then click [Next>].



Windows NT Workstation Setup

Name and Organization

Please type your full name in the box below. You may also specify the name of your company or organization if you wish.

The information you enter will be used to personalize your installation of Windows NT.

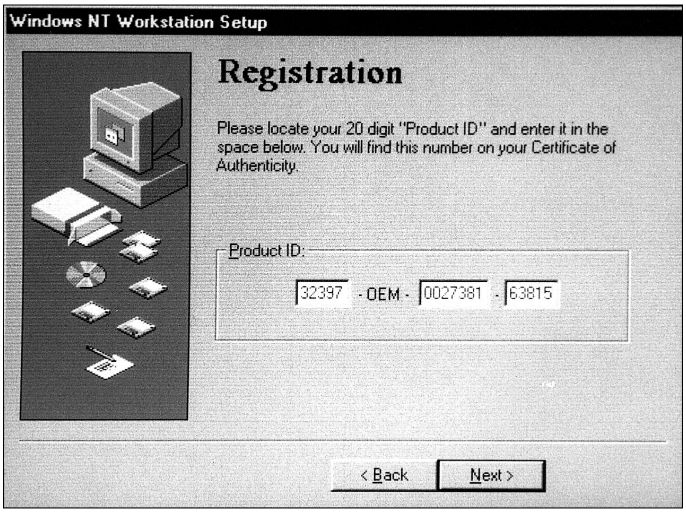
Name: QA-WS

Organization: FUJIFILM

(4) In the following "Registration" dialog box, enter the product ID, and Click [Next].

◆ NOTE ◆

- *The product ID is provided on the cover of the First Stepup Guide.*
- *The following product ID is an example and is not for use.*
- *To use the ten-key for entering values, press the <Num Lock> key to enable use.*



Windows NT Workstation Setup

Registration

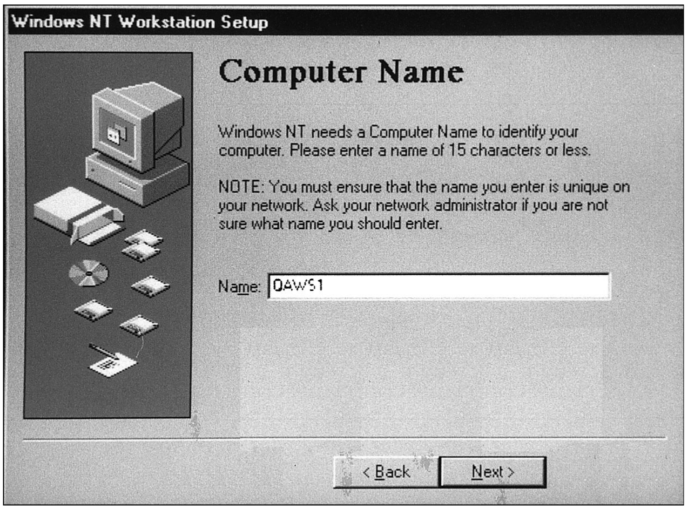
Please locate your 20 digit "Product ID" and enter it in the space below. You will find this number on your Certificate of Authenticity.

Product ID: 32397 - OEM - 0027381 - 63815

(5) At the "Computer Name" screen, enter the computer name (Eg. QAWS1) in the "Name" box, and click [Next>].

◆ NOTE ◆

Enter the computer name in capital letters.



Computer Name

Windows NT needs a Computer Name to identify your computer. Please enter a name of 15 characters or less.

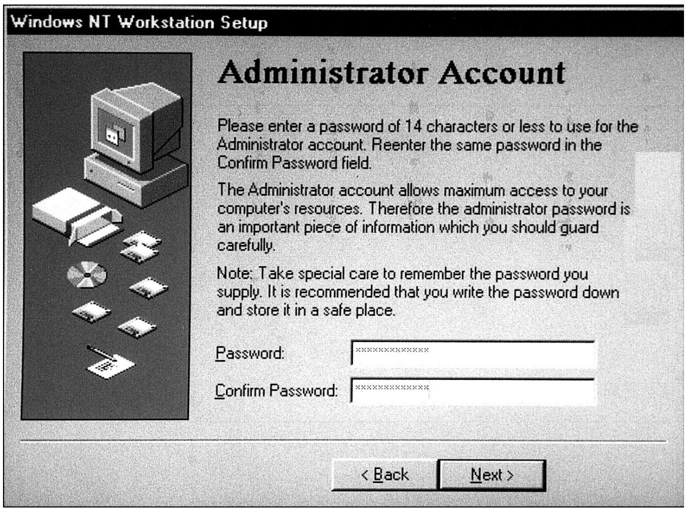
NOTE: You must ensure that the name you enter is unique on your network. Ask your network administrator if you are not sure what name you should enter.

Name: QAWS1

(6) At the "Adminstrator Account" screen, enter the password (fieldengineer) in the "Password" box, then enter the same password again in the "Confirm Password" box, then click [Next>].

◆ NOTE ◆

- *The password entered will be displayed as ****.*
- *If the password entered in the "Confirm Password" box differs from that in the "Password" box, Setup will not proceed.*
- *Make sure the password entered cannot be accessed by others.*



Administrator Account

Please enter a password of 14 characters or less to use for the Administrator account. Reenter the same password in the Confirm Password field.

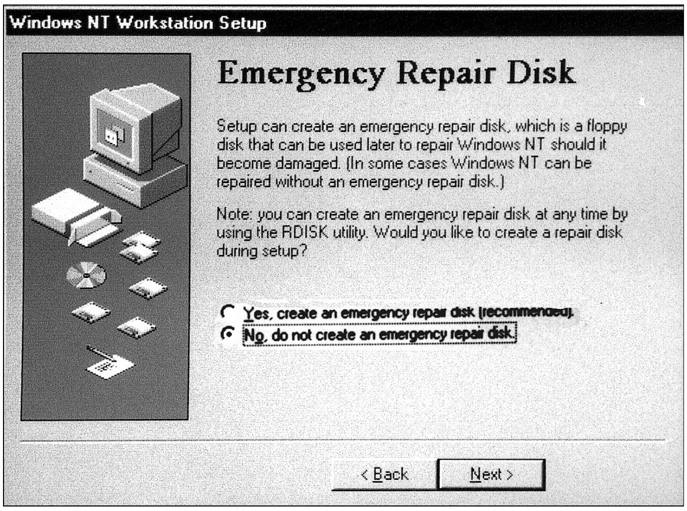
The Administrator account allows maximum access to your computer's resources. Therefore the administrator password is an important piece of information which you should guard carefully.

Note: Take special care to remember the password you supply. It is recommended that you write the password down and store it in a safe place.

Password: **************

Confirm Password: **************

(7) At the "Emergency Repair Disk" screen, click "No, do not create an emergency repair disk." and then [Next>].



Windows NT Workstation Setup

Emergency Repair Disk

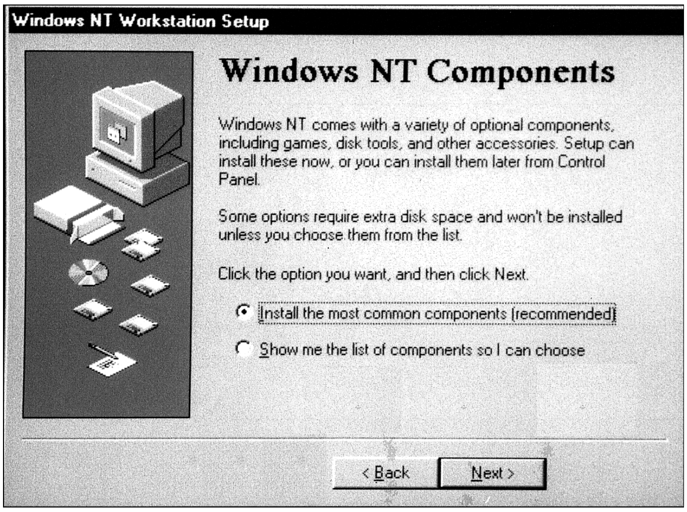
Setup can create an emergency repair disk, which is a floppy disk that can be used later to repair Windows NT should it become damaged. (In some cases Windows NT can be repaired without an emergency repair disk.)

Note: you can create an emergency repair disk at any time by using the RDISK utility. Would you like to create a repair disk during setup?

○ Yes, create an emergency repair disk (recommended).

● No, do not create an emergency repair disk.

(8) At the "Windows NT Components" screen, click "Install the most common components (recommended)" and then [Next>].



Windows NT Workstation Setup

Windows NT Components

Windows NT comes with a variety of optional components, including games, disk tools, and other accessories. Setup can install these now, or you can install them later from Control Panel.

Some options require extra disk space and won't be installed unless you choose them from the list.

Click the option you want, and then click Next.

● Install the most common components (recommended)

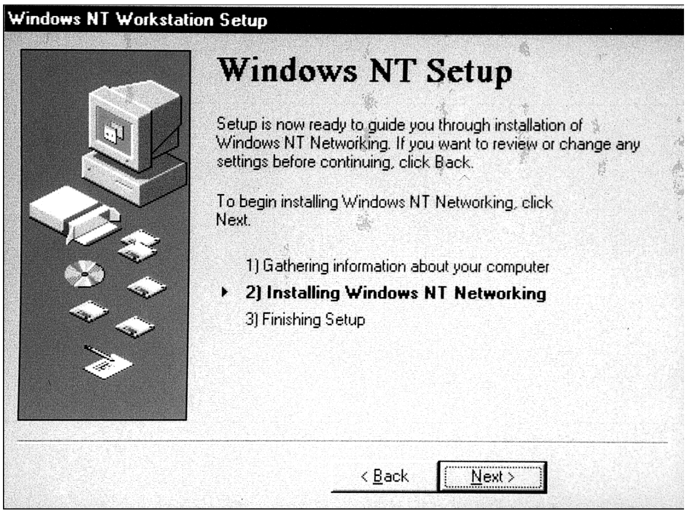
○ Show me the list of components so I can choose

■ Installing the Precision 410 Windows NT Network

◆ *NOTE* ◆

When Precision 420 is used, do not perform steps hereafter. Steps hereafter to be observed for installation are described in “Appendix 4. OS Installation After Network Settings When Precision 420 is Used.” Note that network installation procedures for Precision 410 and 420 are different with each other.

(1) At the "Windows NT Setup" screen, click [Next>].



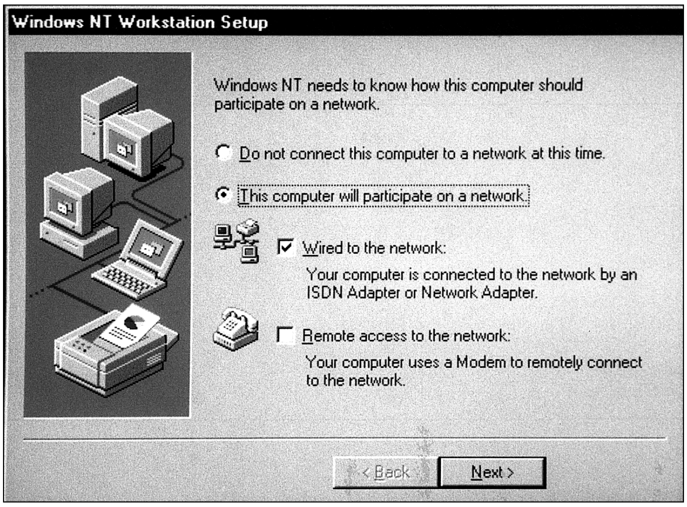
Windows NT Setup

Setup is now ready to guide you through installation of Windows NT Networking. If you want to review or change any settings before continuing, click Back.

To begin installing Windows NT Networking, click Next.

1) Gathering information about your computer
▸ **2) Installing Windows NT Networking**
3) Finishing Setup

(2) At the following screen, check that "This computer will participate on a network" and "Wired to the network:" are selected , then click [Next>].



Windows NT needs to know how this computer should participate on a network.

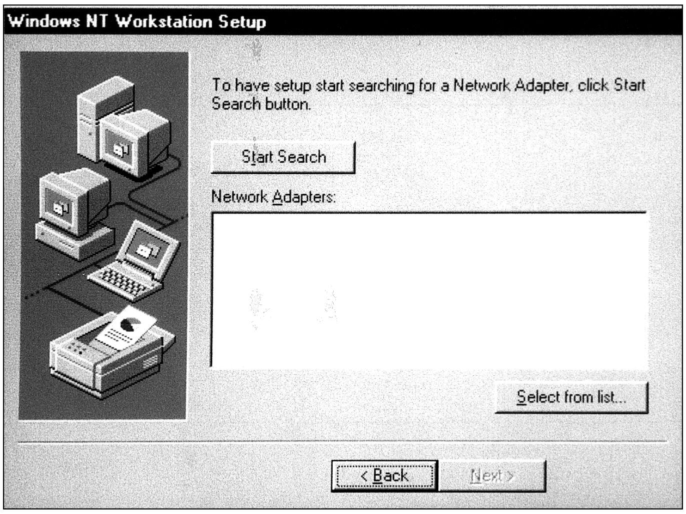
○ Do not connect this computer to a network at this time.

● This computer will participate on a network.

☑ Wired to the network:
Your computer is connected to the network by an ISDN Adapter or Network Adapter.

☐ Remote access to the network:
Your computer uses a Modem to remotely connect to the network.

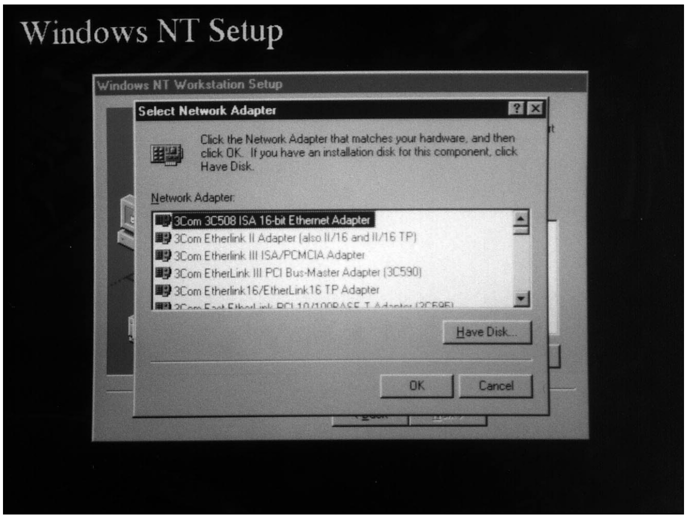
(3) Setup searches for a network adapter (Ethernet board) mounted to the unit.
Click “Select from list.”



To have setup start searching for a Network Adapter, click Start Search button.

Windows NT Workstation Setup
Start Search
Network Adapters:
Select from list...
< Back
Next >

(4) At the following screen, click [Have Disk].



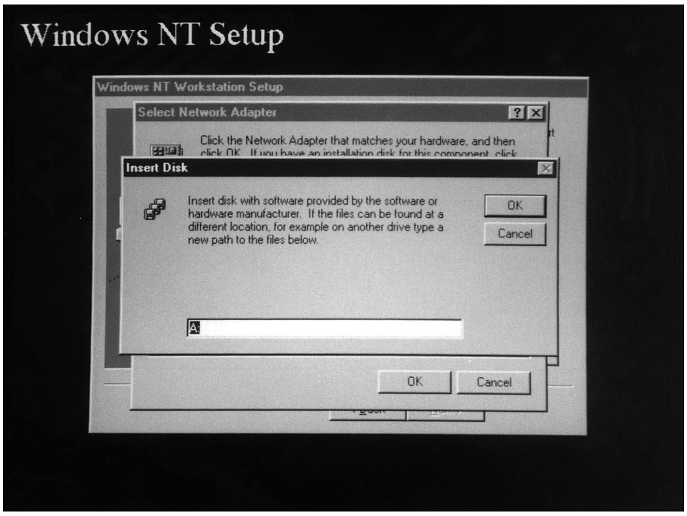
Click the Network Adapter that matches your hardware, and then click OK. If you have an installation disk for this component, click Have Disk.

Network Adapter:

- 3Com 3C508 ISA 16-bit Ethernet Adapter
- 3Com Etherlink II Adapter (also II/16 and II/16 TP)
- 3Com Etherlink III ISA/PCMCIA Adapter
- 3Com EtherLink III PCI Bus-Master Adapter (3C590)
- 3Com Etherlink16/EtherLink16 TP Adapter

Windows NT Setup
Windows NT Workstation Setup
Select Network Adapter
Have Disk...
OK
Cancel

(5) At the following screen, insert the FD labeled "Dell Workstation 410 Windows NT4.0 NIC Drivers 2/2", and click [OK]

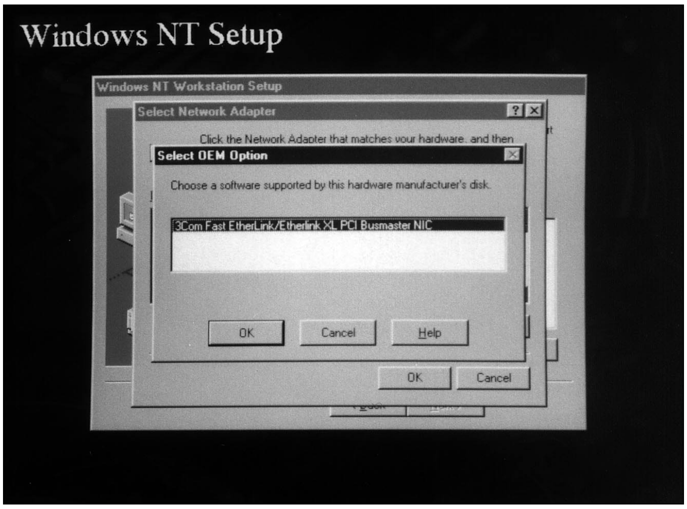


Insert disk with software provided by the software or hardware manufacturer. If the files can be found at a different location, for example on another drive type a new path to the files below.

A:

Windows NT Setup
Windows NT Workstation Setup
Select Network Adapter
Insert Disk
OK
Cancel
OK
Cancel

(6) At the following screen, click [OK].


Windows NT Setup
Windows NT Workstation Setup
Select Network Adapter
OK
Cancel
Help
OK
Cancel

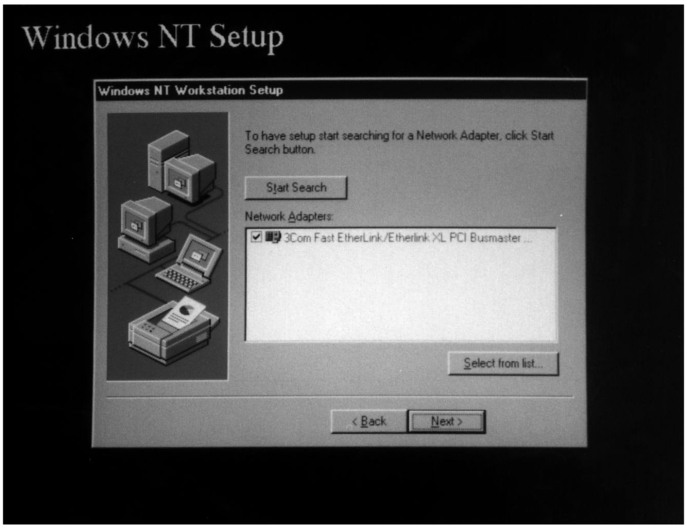
Click the Network Adapter that matches your hardware, and then

Select OEM Option

Choose a software supported by this hardware manufacturer's disk.

3Com Fast EtherLink/Etherlink XL PCI Busmaster NIC

(7) After the completion of automatic detection, when the following network driver has been detected, click [Next].
"3Com Fast EtherLink/Etherlink XL PCI Busmaster NIC"

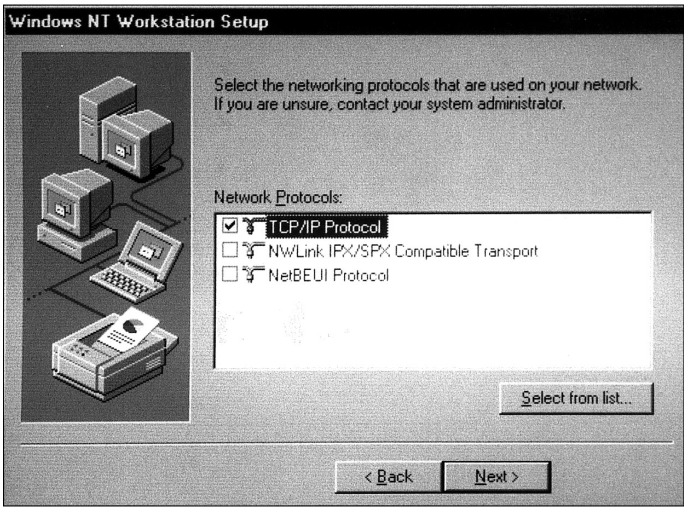

Windows NT Setup
Windows NT Workstation Setup
Start Search
Select from list...
< Back
Next >

To have setup start searching for a Network Adapter, click Start Search button.

Network Adapters:

☑ 3Com Fast EtherLink/Etherlink XL PCI Busmaster ...

(8) Check that "TCP/IP Protocol" is selected, and click [Next>].

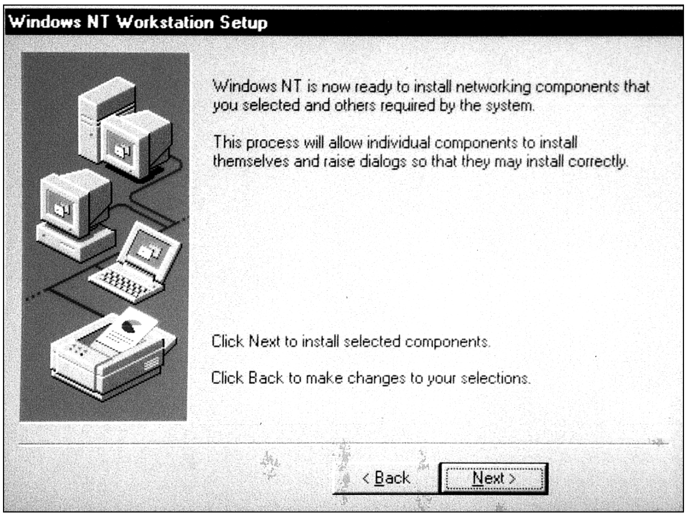

Windows NT Workstation Setup
Select from list...
< Back
Next >

Select the networking protocols that are used on your network.
If you are unsure, contact your system administrator.

Network Protocols:

☑ TCP/IP Protocol
☐ NWLink IPX/SPX Compatible Transport
☐ NetBEUI Protocol

(9) If the settings made so far are correct, click [Next>].
If incorrect, click [<Back].
The confirmation message then appears. Click [OK].



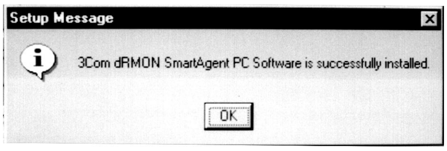
Windows NT Workstation Setup

Windows NT is now ready to install networking components that you selected and others required by the system.

This process will allow individual components to install themselves and raise dialogs so that they may install correctly.

Click Next to install selected components.

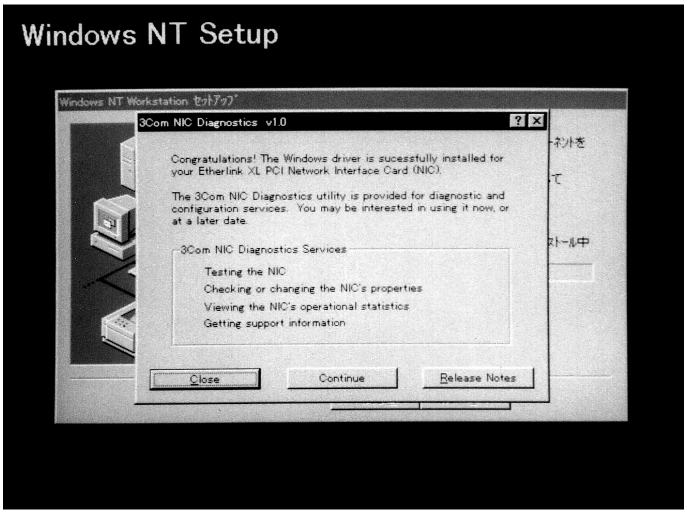
Click Back to make changes to your selections.



Setup Message

3Com dRMON SmartAgent PC Software is successfully installed.

(10) When the following "3Com NIC Diagnostics v1.0" dialog box appears, click [Close].



Windows NT Setup

Windows NT Workstation セットアップ

3Com NIC Diagnostics v1.0

Congratulations! The Windows driver is sucesstfully installed for your Etherlink XL PCI Network Interface Card (NIC).

The 3Com NIC Diagnostics utility is provided for diagnostic and configuration services. You may be interested in using it now, or at a later date.

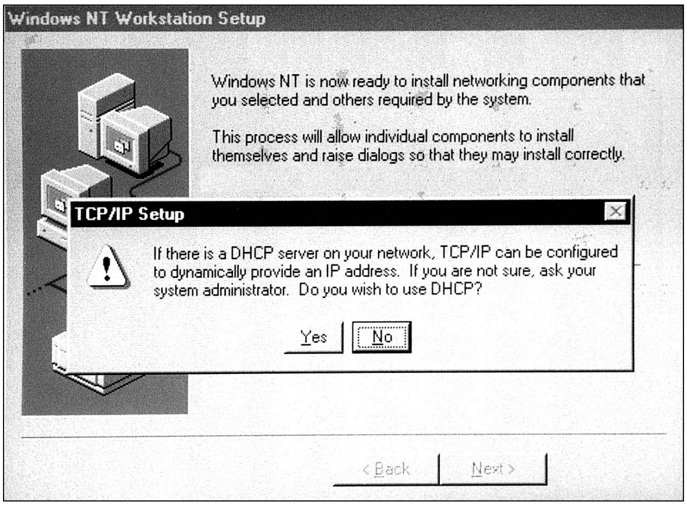
3Com NIC Diagnostics Services

Testing the NIC
Checking or changing the NIC's properties
Viewing the NIC's operational statistics
Getting support information

(11) In the following dialog box, click [No] as the DHCP server is not used.

◆ *REFERENCE* ◆

If [Yes] to use the DHCP server is selected by mistake, Setup will proceed to step (14), disabling setting of the IP address.
In this case, carry out the setup of step (14) and onwards, and after completing Windows NT installation, click "Control Panel", then "Network", and finally the "Protocol" tab, and press the "Properties" button to set the IP address.

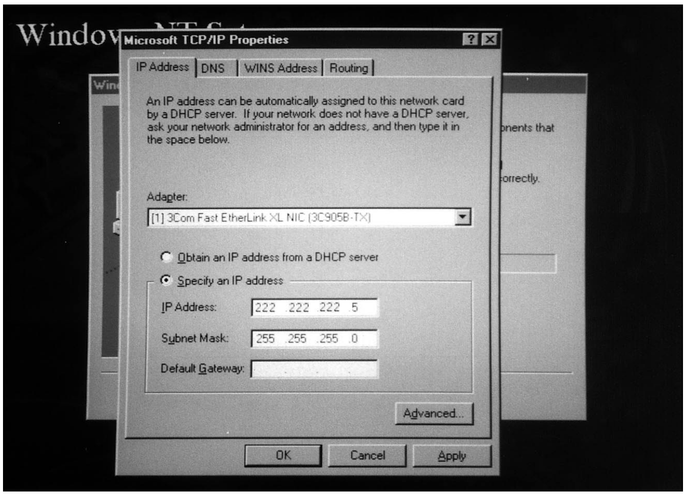


Windows NT is now ready to install networking components that you selected and others required by the system.

This process will allow individual components to install themselves and raise dialogs so that they may install correctly.

If there is a DHCP server on your network, TCP/IP can be configured to dynamically provide an IP address. If you are not sure, ask your system administrator. Do you wish to use DHCP?

(12) Click the "IP address" tab, then click "Specify an IP address", enter values in the "IP Address" and "Subnet Mask" boxes, and click [OK].



An IP address can be automatically assigned to this network card by a DHCP server. If your network does not have a DHCP server, ask your network administrator for an address, and then type it in the space below.

Adapter: [1] 3Com Fast EtherLink XL NIC (3C905B-TX)

○ Obtain an IP address from a DHCP server

● Specify an IP address

IP Address: 222 .222 .222 .5

Subnet Mask: 255 .255 .255 .0

Default Gateway:

Example:

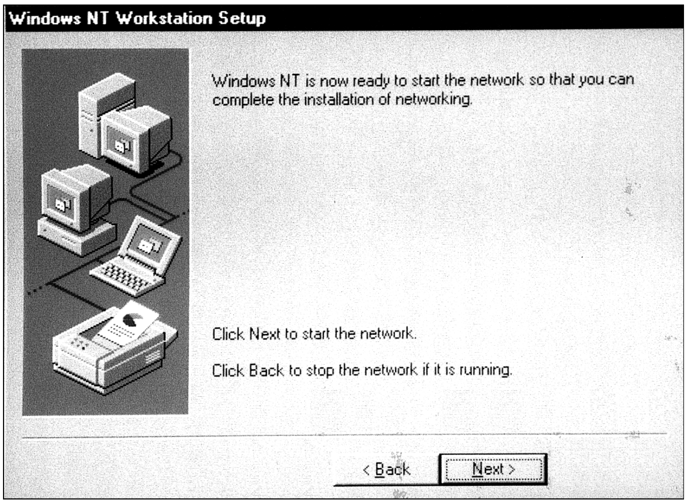
IP Address: 222.222.222.5

Subnet Mask: 255.255.255.0

◆ *NOTE* ◆

- *Setup cannot be completed without entering the subnet mask.*
- *Even when not using the subnet mask, enter the temporary class C subnet mask data (255.255.255.0).*

(13) When the following screen appears, Click [Next].



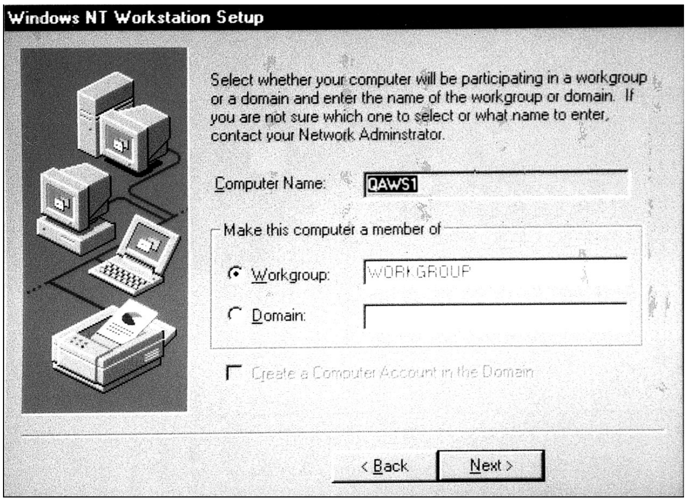
Windows NT Workstation Setup

Windows NT is now ready to start the network so that you can complete the installation of networking.

Click Next to start the network.

Click Back to stop the network if it is running.

(14) At the following screen, click [Next>].



Windows NT Workstation Setup

Select whether your computer will be participating in a workgroup or a domain and enter the name of the workgroup or domain. If you are not sure which one to select or what name to enter, contact your Network Adminstrator.

Computer Name: QAWS1

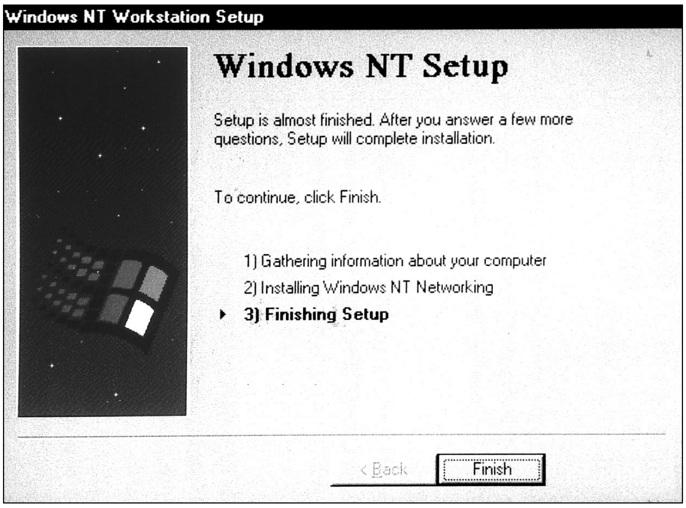
Make this computer a member of

● Workgroup: WORKGROUP

○ Domain:

☐ Create a Computer Account in the Domain

(15) At the following screen, click [Finish].



Windows NT Workstation Setup

Windows NT Setup

Setup is almost finished. After you answer a few more questions, Setup will complete installation.

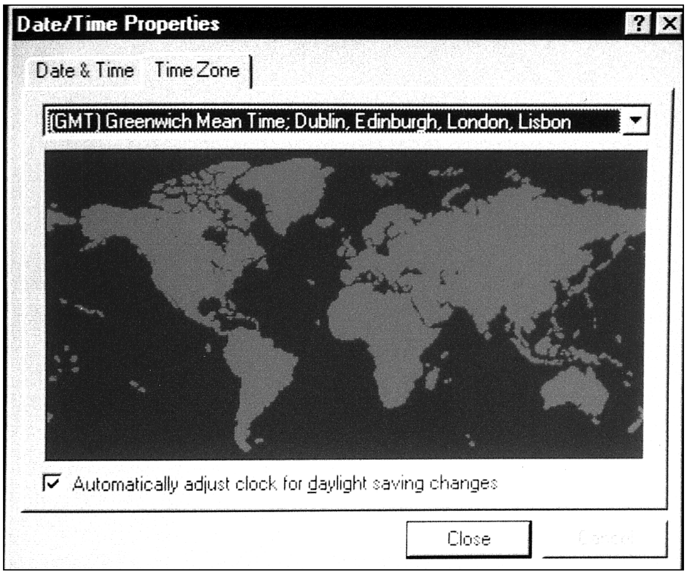
To continue, click Finish.

1) Gathering information about your computer

2) Installing Windows NT Networking

▸ **3) Finishing Setup**

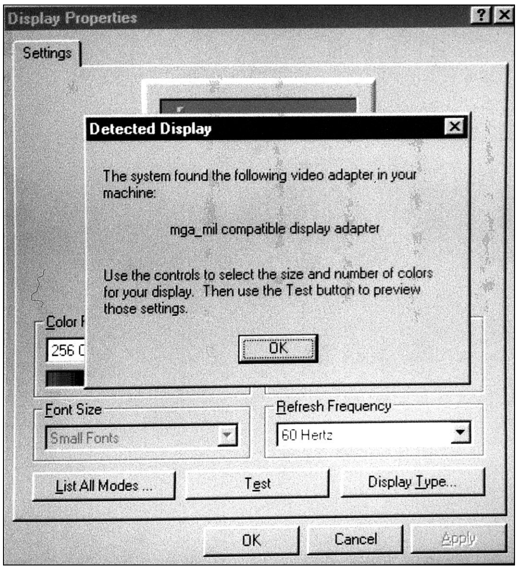
(16) At the following screen, set the Date & Time and Time Zone, and click [Close].


Date/Time Properties
Date & Time
Time Zone
(GMT) Greenwich Mean Time; Dublin, Edinburgh, London, Lisbon
☑ Automatically adjust clock for daylight saving changes
Close
Cancel

(17) At the "Detected Display" dialog box that appears, check the video adapter detected , and click [OK].

◆ *NOTE* ◆

As installation of the VD is carried out after installing Windows NT, detailed settings are not necessary here.


Display Properties
Settings
Detected Display

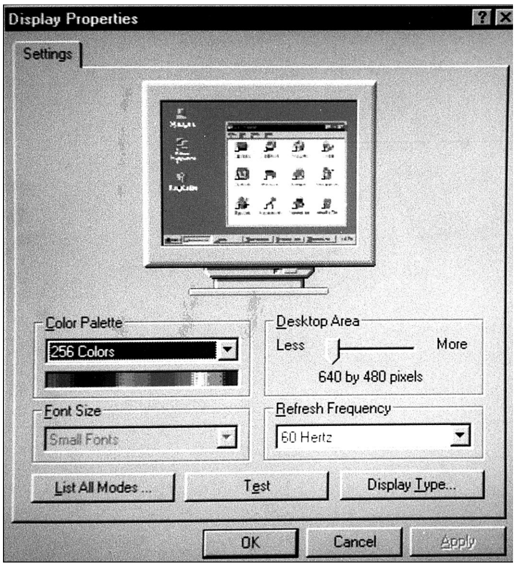
The system found the following video adapter in your machine:

mga_mil compatible display adapter

Use the controls to select the size and number of colors for your display. Then use the Test button to preview those settings.

OK
Color P
256 C
Font Size
Small Fonts
Refresh Frequency
60 Hertz
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

(18) At the following screen, click [Test].



Color Palette: 256 Colors

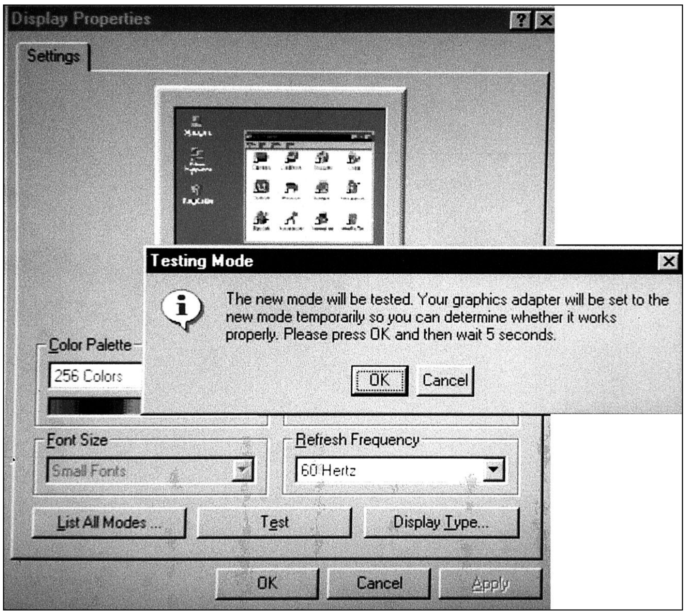
Desktop Area: Less — More, 640 by 480 pixels

Font Size: Small Fonts

Refresh Frequency: 60 Hertz

Display Properties
Settings
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

(19) At the following screen, click [OK].



Testing Mode

The new mode will be tested. Your graphics adapter will be set to the new mode temporarily so you can determine whether it works properly. Please press OK and then wait 5 seconds.

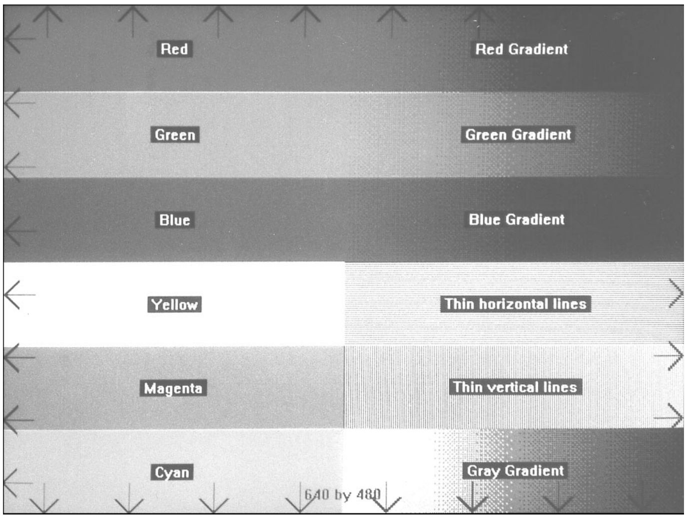
Color Palette: 256 Colors

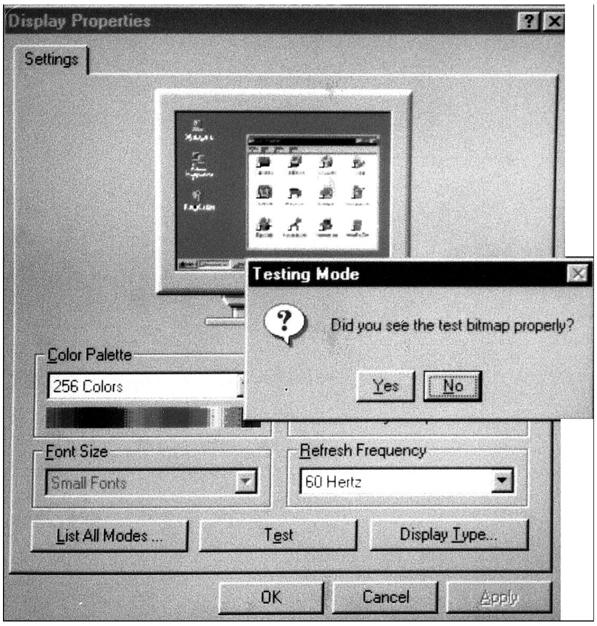
Font Size: Small Fonts

Refresh Frequency: 60 Hertz

Display Properties
Settings
OK
Cancel
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

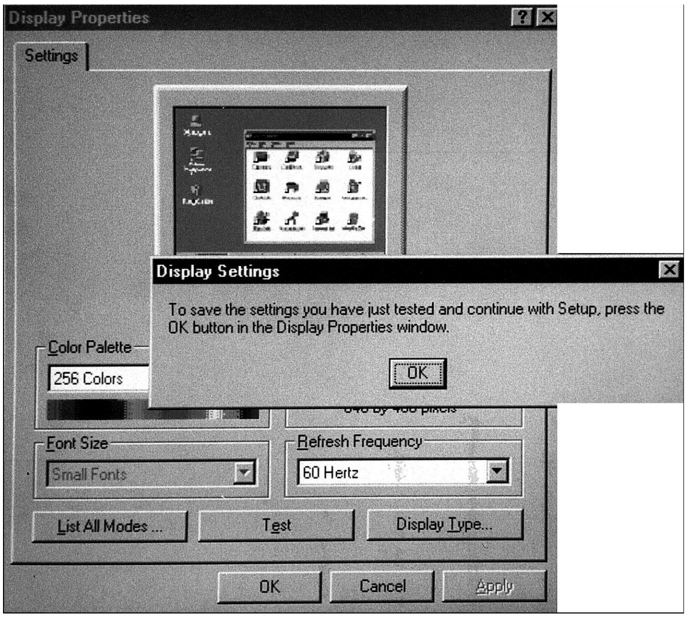
(20) The test bit map appears next for 5 seconds, followed by the next screen.
Click [Yes].


Red
Red Gradient
Green
Green Gradient
Blue
Blue Gradient
Yellow
Thin horizontal lines
Magenta
Thin vertical lines
Cyan
Gray Gradient
640 by 480


Display Properties
Settings
Color Palette
256 Colors
Font Size
Small Fonts
Refresh Frequency
60 Hertz
List All Modes ...
Test
Display Type...
OK
Cancel
Apply
Testing Mode
Yes
No

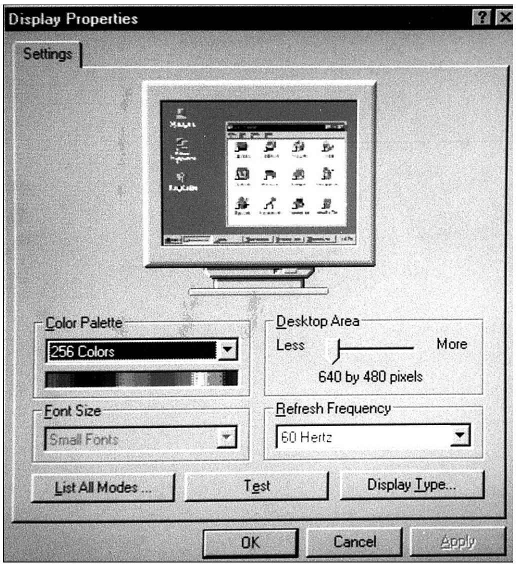
Did you see the test bitmap properly?

(21) At the following screen, click [OK].


Display Properties
Settings
Color Palette
256 Colors
Font Size
Small Fonts
Refresh Frequency
60 Hertz
List All Modes ...
Test
Display Type...
OK
Cancel
Apply
Display Settings
OK

To save the settings you have just tested and continue with Setup, press the OK button in the Display Properties window.

(22) Click [OK] in "Display Properties" to close it. Files will be copied from the CD-ROM to the HDD.



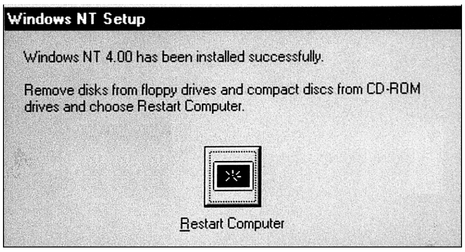
Color Palette: 256 Colors

Desktop Area: Less — More, 640 by 480 pixels

Font Size: Small Fonts

Refresh Frequency: 60 Hertz

(23) When the following screen appears, remove the floppy disk and CD-ROM, and click [Restart Computer].



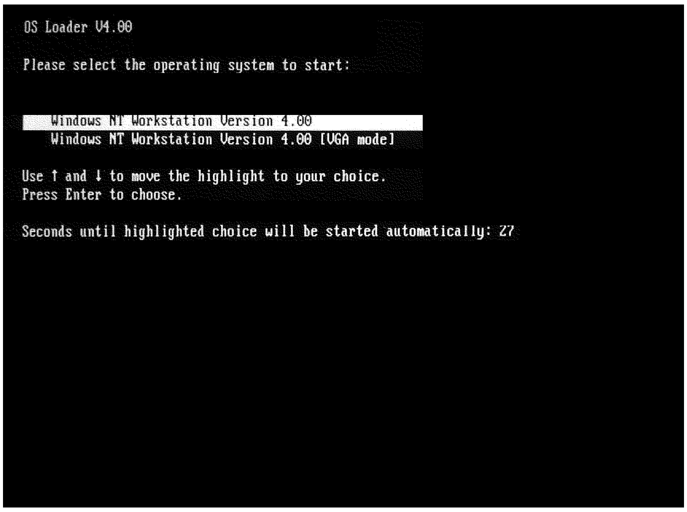
Windows NT 4.00 has been installed successfully.

Remove disks from floppy drives and compact discs from CD-ROM drives and choose Restart Computer.

(24) When the computer restarts after 2 seconds and the following screen to select the OS appears, select "Windows NT Workstation Version 4.00" , and press the <Enter> key.

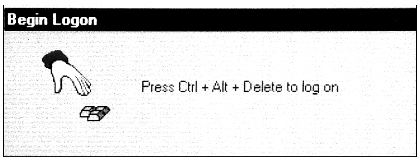
◆ *REFERENCE* ◆

If the <Enter> key is not pressed within 30 seconds, the operating system selected will start.



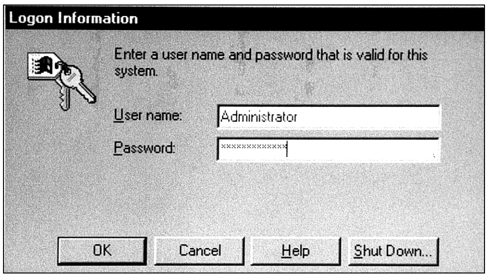
```
OS Loader V4.00

Please select the operating system to start:


    Windows NT Workstation Version 4.00
    Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 27
```

(25) When the "Begin Logon" dialog box appears, press the <Ctrl> <Alt>, and <Delete> keys together.



Press Ctrl + Alt + Delete to log on

(26) When the "Logon Information" dialog box appears, enter the password (fieldengineer) , and click [OK] to log-on to Windows NT.



Enter a user name and password that is valid for this system.

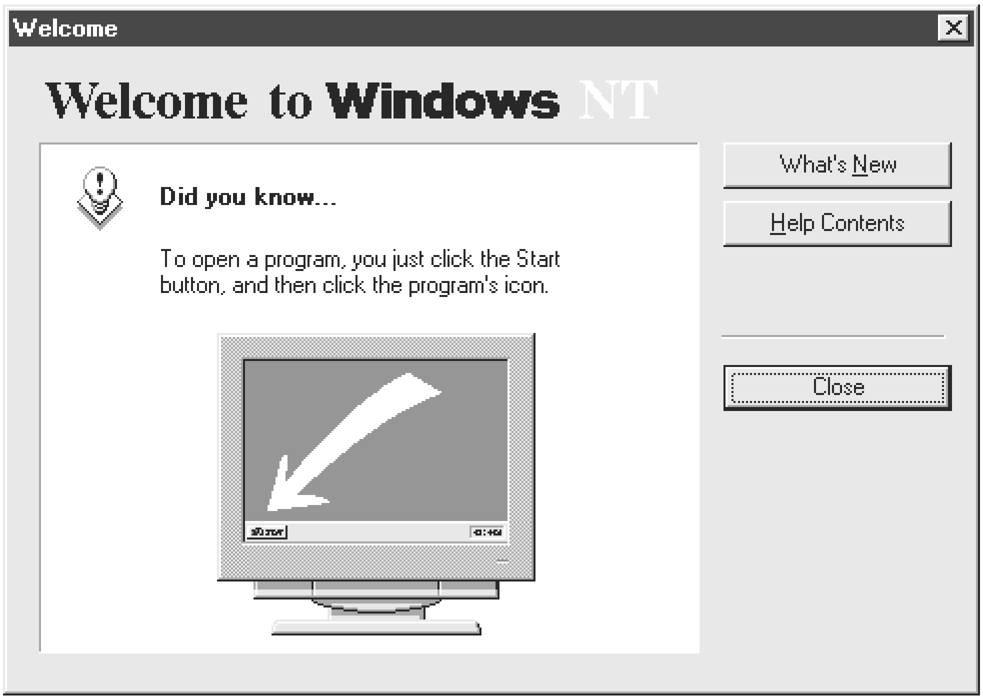
User name: Administrator

Password: *************

◆ NOTE ◆

To log onto Windows NT as the adminstrator, leave "User Name" at its default setting "Administrator".

(27) When logged onto Windows NT, the Welcome to Windows NT screen appears.
Click [Close] to return to the Windows NT desktop.



Welcome to Windows NT

Did you know...

To open a program, you just click the Start button, and then click the program's icon.

Proceed then to “Maintenance 16. Creating and Formatting the Image Storage Area on D:”. Create image storage area and make it ready to use and then install the Service Pack (“Maintenance 7.3 Installing the Service Pack”).

■ Setting Up Virtual Memory

Set up virtual memory for the PC as described below.

(1) Right-click [My Computer] on the desktop and select [Properties].
➔ The “System Properties” window opens.

(2) Select the [Performance] tab and click [Change] of “Virtual Memory”.
➔ The “Virtual Memory” window opens.

(3) Select the [C drive]. Set up the [Initial Size] and [Maximum Size] as follows and then click [OK].
- Initial size (MB) = Real memory size+11
- Maximum size (MB) = Initial size+50

➔ The “System Properties” window opens.

(4) Click [OK].

■ Installing the Service Pack

After OS installation, install the Service Pack from the Windows NT Service Pack CD-ROM.
Install the Service Pack following on-screen instructions. After the completion of installation processing, restart the PC.

Appendix 7. A05 Version Software

7.1 Software Version Upgrade to A05

Make the following setups according to order shown below.

- Software installation
- Software installation
- File copying
- Registry settings
- Image information file conversion
- Database re-building
- Marker replacement [as necessary]

❍ Have the following ready to use.

- QA-WS A05 version software installation CD-ROM ("AP-CD" hereinafter)

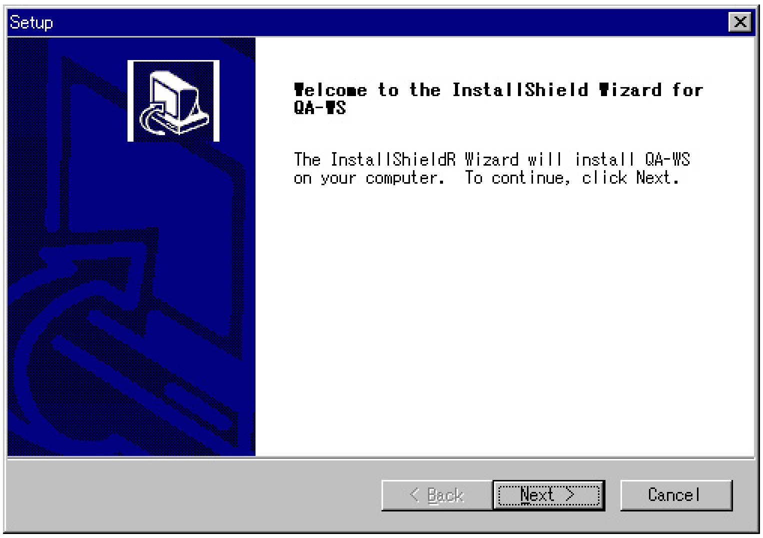
■ Software installation

Use the procedure described herein to install the A05 version software.

(1) Insert the AP-CD into the CD-ROM drive.

➔ After a while, the "Setup" screen appears.

(2) Click Next >.

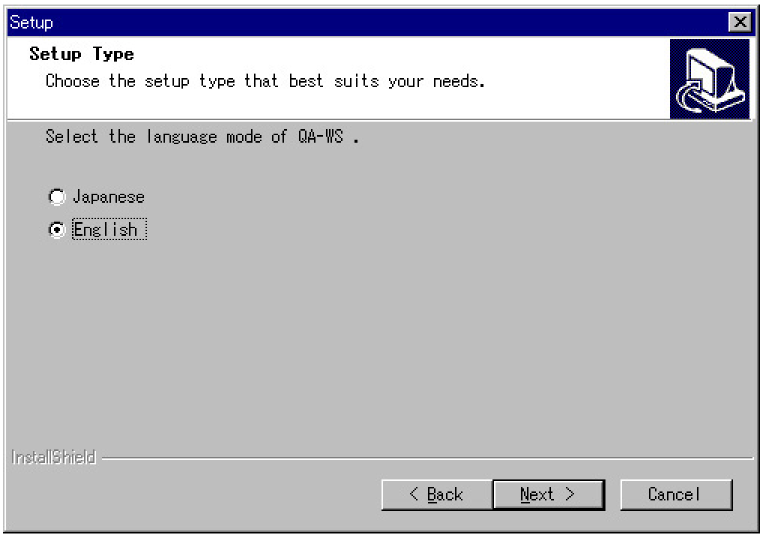


Welcome to the InstallShield Wizard for QA-WS

The InstallShieldR Wizard will install QA-WS on your computer. To continue, click Next.

FR5H0181.EPS

(3) Select "Japanese" or "English" for the language to be used and click Next >.



Setup Type

Choose the setup type that best suits your needs.

Select the language mode of QA-WS .

○ Japanese

● English

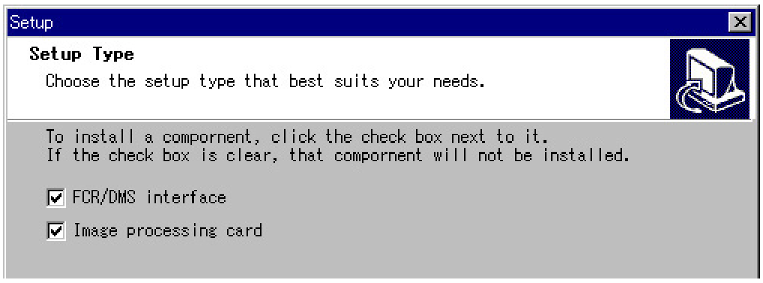
FR5H0182.EPS

(4) Check the box (☐ ➔ ☑) of the component to be used and click Next >.

- ☐ FCR/DMS interface: When using the E-i/f
- ☐ Image processing card : When using the image processing board

◆ NOTE ◆

When the image processing board has been mounted on the QA-WS, check (☐ ➔ ☑) the box of the ☐ Image processing card *Image processing card.*



Setup Type

Choose the setup type that best suits your needs.

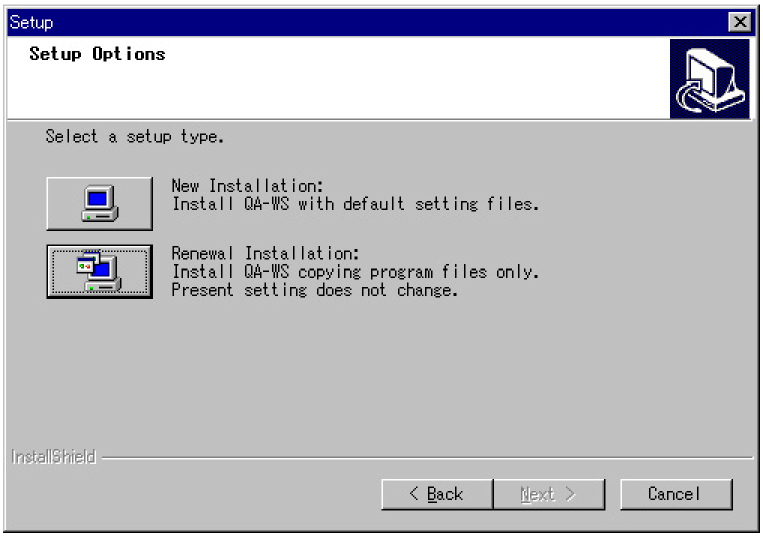
To install a compornent, click the check box next to it.
If the check box is clear, that compornent will not be installed.

☑ FCR/DMS interface

☑ Image processing card

FR5H0183.EPS

(5) For the installation type, click .



Setup Options

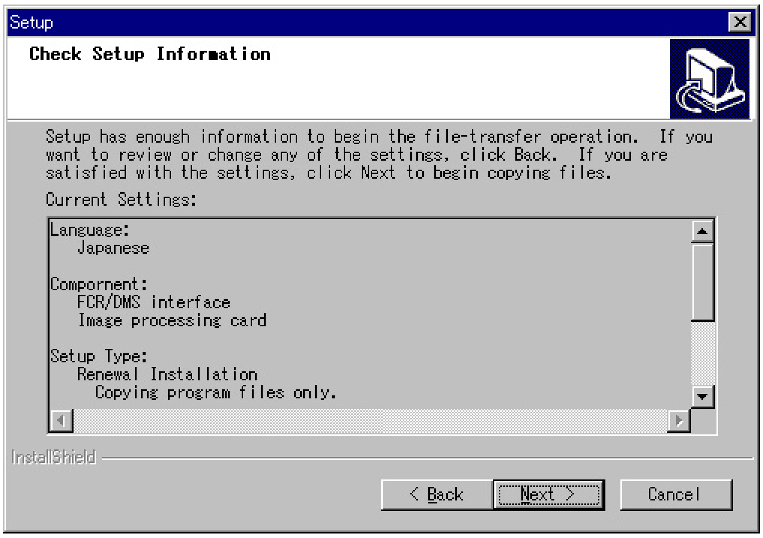
Select a setup type.

New Installation:
Install QA-WS with default setting files.

Renewal Installation:
Install QA-WS copying program files only.
Present setting does not change.

FR5H0184.EPS

(6) Make sure that the content of the "Current Settings:" is as actually has been specified and click Next >.



Check Setup Information

Setup has enough information to begin the file-transfer operation. If you want to review or change any of the settings, click Back. If you are satisfied with the settings, click Next to begin copying files.

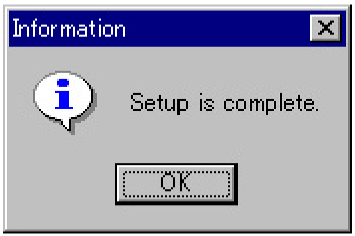
Current Settings:

```
Language:
   Japanese

Compornent:
   FCR/DMS interface
   Image processing card

Setup Type:
   Renewal Installation
     Copying program files only.
```

FR5H0185.EPS

➔ The Information screen appears.

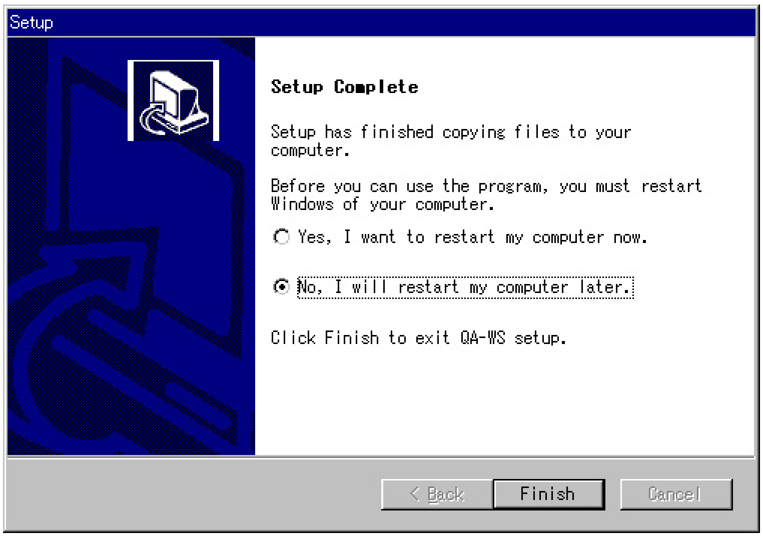
(7) Click OK.



Setup is complete.

FR5H0186.EPS

(8) Select ● No, I will restart my computer later. and click Finish.



Setup Complete

Setup has finished copying files to your computer.

Before you can use the program, you must restart Windows of your computer.

○ Yes, I want to restart my computer now.

● No, I will restart my computer later.

Click Finish to exit QA-WS setup.

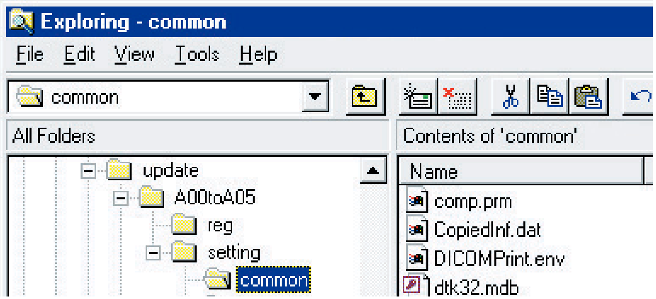
FR5H0187.EPS

■ File copying

Copy files from the AP-CD to the hard disk as necessary.

(1) Open the folders as follows.

- To upgrade software version from A00 to A05:
  “CD-ROM drive:\update\A00toA05\setting\common”
- To upgrade software version from A01-00, A01 or A02-00 to A05:
  “CD-ROM drive:\update\A01toA05\setting\common”
- To upgrade software version from A02-01, A02-02, A02-03, A02, A03-00 or A03-01 to A05:
  “CD-ROM drive:\update\A02toA05\setting\common”
- To upgrade software version from A03, Y00 or A4-00 to A05:
  “CD-ROM drive:\update\A03toA05\setting\common”
- To upgrade software versions from A4-01 or A4-02 to A05:
  “CD-ROM drive:\update\A04-01toA05\setting\common”
- To upgrade software version from A04 to A05:
  “CD-ROM drive:\update\A04toA05\setting\common”
- To upgrade software version from A05-00 to A05:
  “CD-ROM drive:\update\A05-00toA05\setting\common”


Exploring - common
File Edit View Tools Help
common
All Folders
update
A00toA05
reg
setting
common
Contents of 'common'
Name
comp.prm
CopiedInf.dat
DICOMPrint.env
dtk32.mdb

FR5H0208.EPS

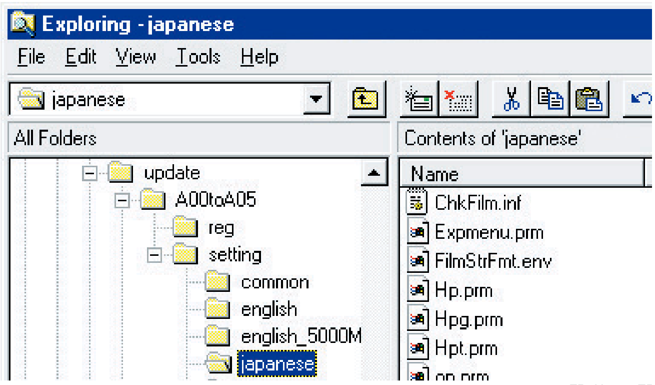
(2) Copy all the files contained in the “common” folder to “C:\Program Files\Hi-cx” folder.

(3) Open the folders as follows.

- To upgrade software version from A00 to A05:
  "CD-ROM drive:\update\A00toA05\setting\japanese or english"
- To upgrade software version from A01-00, A01 or A02-00 to A05:
  "CD-ROM drive:\update\A01toA05\setting\japanese or english"
- To upgrade software version from A02-01, A02-02, A02-03, A02, A03-00 or A03-01 to A05:
  "CD-ROM drive:\update\A02toA05\setting\japanese or english"
- To upgrade software version from A03, Y00 or A4-00 to A05:
  "CD-ROM drive:\update\A03toA05\setting\japanese or english"
- To upgrade software version from A4-01 or A4-02 to A05:
  "CD-ROM drive:\update\A4-01toA05\setting\japanese or english"
- To upgrade software version from A04 to A05:
  "CD-ROM drive:\update\A4toA05\setting\japanese or english"
- To upgrade software version from A05-00 to A05:
  "CD-ROM drive:\update\A05-00toA05\japanese or english"

◆ NOTE ◆

For whether "japanese" or "english", be sure to select the same folder as the language that has been selected for AP installation.

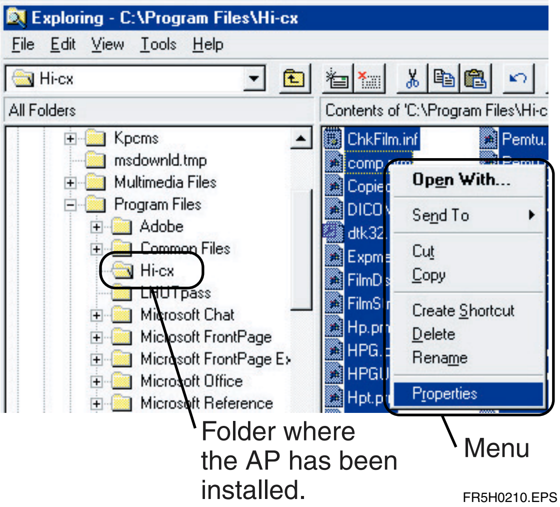

Exploring - japanese
File
Edit
View
Tools
Help
japanese
All Folders
Contents of 'japanese'
update
A00toA05
reg
setting
common
english
english_5000M
japanese
Name
ChkFilm.inf
Expmenu.prm
FilmStrFmt.env
Hp.prm
Hpg.prm
Hpt.prm

FR5H0209.EPS

(4) Copy all the files contained in the "japanese" or "english" folder to the "C:\Program Files\Hi-cx" folder.

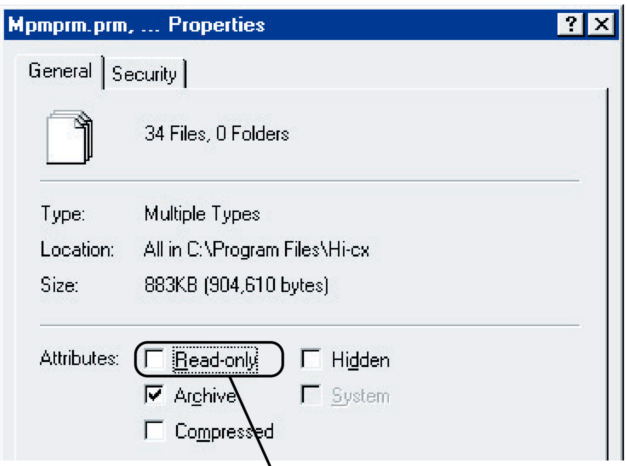
(5) Select from the "C:\Program Files\Hi-cx" folder all the files that have been copied at steps (2) and (4) above.

(6) Right-click the mouse to select Properties from the menu.


Exploring - C:\Program Files\Hi-cx
File Edit View Tools Help
Hi-cx
All Folders
Contents of 'C:\Program Files\Hi-c
Kpcms
msdownld.tmp
Multimedia Files
Program Files
Adobe
Common Files
Hi-cx
LMUTpass
Microsoft Chat
Microsoft FrontPage
Microsoft FrontPage Ex
Microsoft Office
Microsoft Reference
ChkFilm.inf
Pemtu.
comp
Copie
DICO
dtk32
Expm
FilmD
FilmS
Hp.pr
HPG.
HPGL
Hpt.p
Open With...
Send To
Cut
Copy
Create Shortcut
Delete
Rename
Properties
Folder where the AP has been installed.
Menu

FR5H0210.EPS

(7) Uncheck ☑ Read-only of the [Properties] dialog box and click OK.


Mpmprm.prm, ... Properties
? ✕
General
Security

34 Files, 0 Folders

Type: Multiple Types

Location: All in C:\Program Files\Hi-cx

Size: 883KB (904,610 bytes)

Attributes:
☐ Read-only ☐ Hidden
☑ Archive ☐ System
☐ Compressed

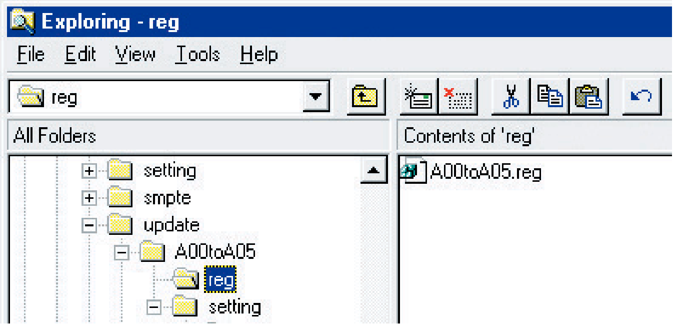
For read only

FR5H0211.EPS

■ Registry settings

(1) Open the folders as follows.

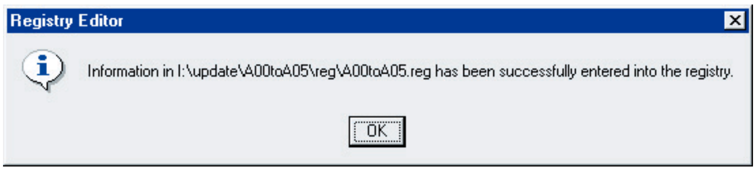
- To upgrade software version from A00 to A05:
  "CD-ROM drive:\update\A00toA05\reg"
- To upgrade software version from A01-00, A01 or A02-00 to A05:
  "CD-ROM drive:\update\A01toA05\reg"
- To upgrade software version from A02-01, A02-02, A02-03, A02, A03-00 or A03-01 to A05:
  "CD-ROM drive:\update\A02toA05\reg"
- To upgrade software version from A03, Y00 or A4-00 to A05:
  "CD-ROM drive:\update\A03toA05\reg"
- To upgrade software version from A4-01 or A4-02 to A05:
  "CD-ROM drive:\update\A04-01toA05\reg"


Exploring - reg
File Edit View Tools Help
reg
All Folders
Contents of 'reg'
setting
smpte
update
A00toA05
reg
setting
A00toA05.reg

FR5H0212.EPS

(2) Double-click the registry file contained in the "reg" folder.
➔ A screen appears indicating the completion of registry settings.

(3) Click OK.


Registry Editor
OK

Information in I:\update\A00toA05\reg\A00toA05.reg has been successfully entered into the registry.

FR5H0213.EPS

◆ *SUPPLEMENT* ◆

When there are a multiple number of registry files in the "reg" folder, repeat steps (2) and (3) for all the files.

■ Image information file conversion

File conversion is necessary because the content of the image information file differs from that of the previous software version.

(1) Open the “C:\Program Files\Hi-cx” folder.

(2) Double-click ImgInfoConv.
➔ The converter starts up.

(3) Click Convert.
➔ The screen that indicates the completion of conversion appears.

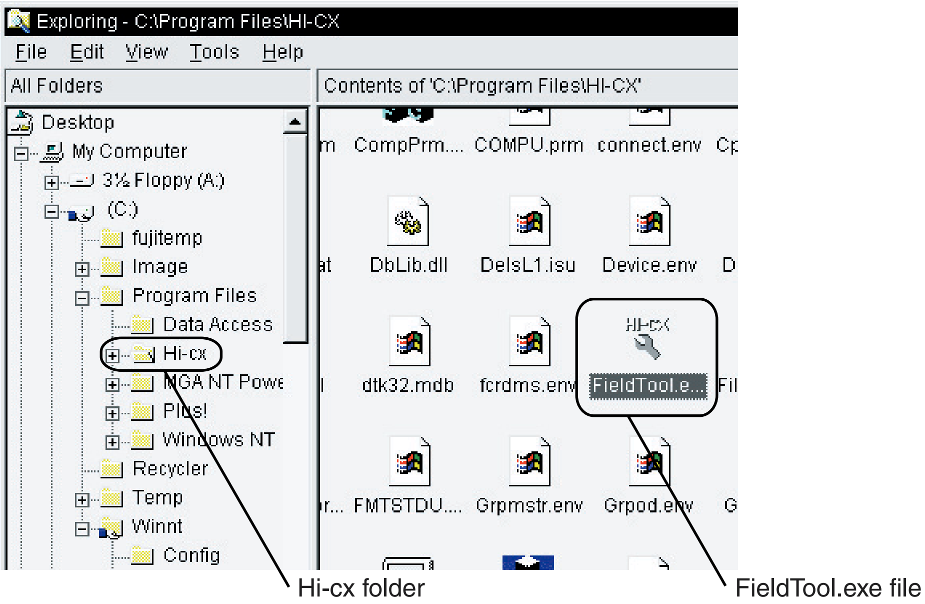
(4) Click OK.

■ Database re-building

When the AP version has been upgraded, the database should be restructured.

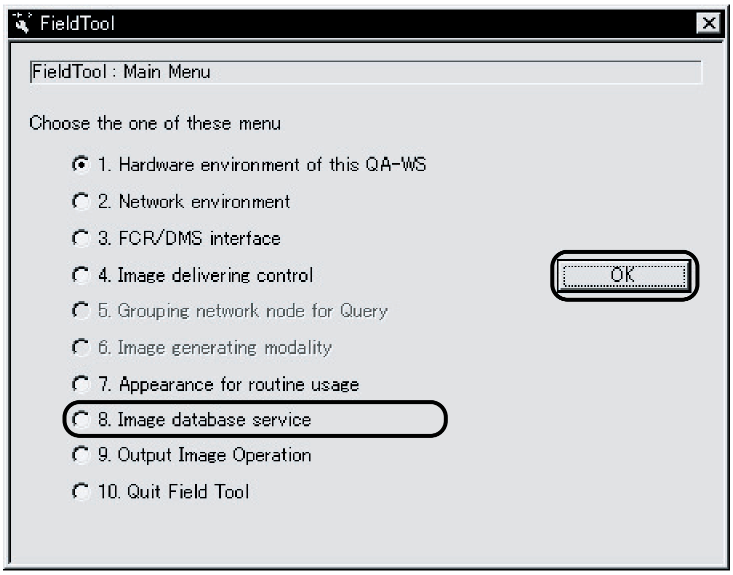
(1) Open the “C:\Program Files\Hi-cx” folder.

(2) Double-click the HI-CX FieldTool.e... file.


Exploring - C:\Program Files\HI-CX
File Edit View Tools Help
All Folders
Contents of 'C:\Program Files\HI-CX'
Desktop
My Computer
3½ Floppy (A:)
(C:)
fujitemp
Image
Program Files
Data Access
Hi-cx
MGA NT Powe
Plus!
Windows NT
Recycler
Temp
Winnt
Config
CompPrm....
COMPU.prm
connect.env
DbLib.dll
DelsL1.isu
Device.env
dtk32.mdb
fcrdms.env
FieldTool.e...
FMTSTDU....
Grpmstr.env
Grpod.env
Hi-cx folder
FieldTool.exe file

FR5H0154.EPS

(3) Select ○ 8. Image database service and click OK.

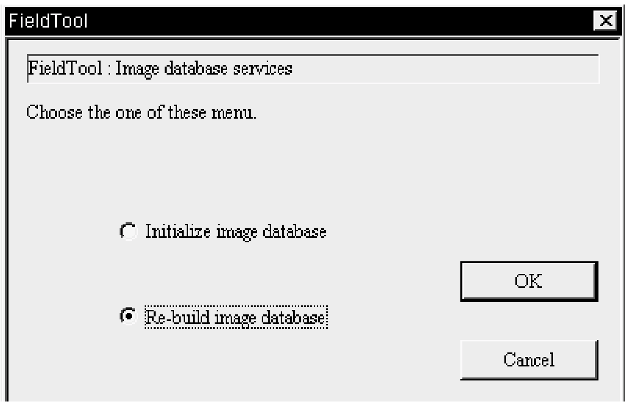

FieldTool
FieldTool : Main Menu
OK

Choose the one of these menu

● 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
○ 8. Image database service
○ 9. Output Image Operation
○ 10. Quit Field Tool

FR5H0155.EPS

(4) Select ● Re-build image database and click OK.

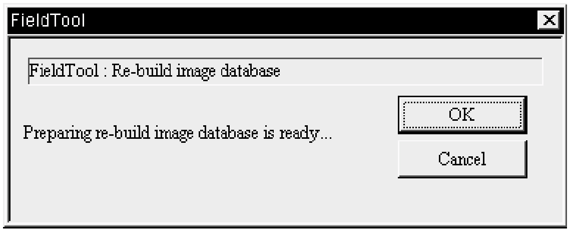

FieldTool
FieldTool : Image database services
OK
Cancel

Choose the one of these menu.

○ Initialize image database
● Re-build image database

FR5H0156.EPS

(5) Click OK.

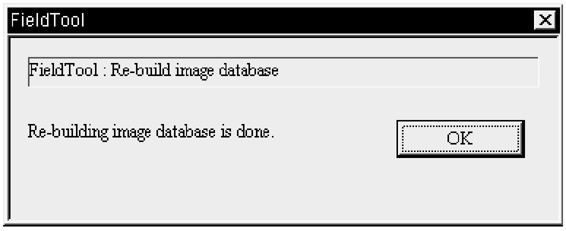

FieldTool
FieldTool : Re-build image database
OK
Cancel

Preparing re-build image database is ready...

FR5H0157.EPS

➔ Database will be re-built.

(6) Click OK.


FieldTool
OK

FieldTool : Re-build image database

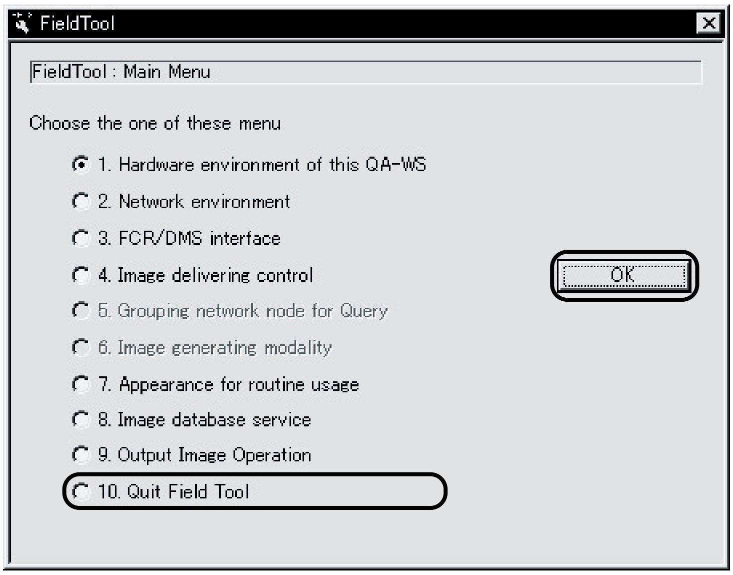
Re-building image database is done.

FR5H0158.EPS

(7) Click Cancel several times.

➔ The system returns to the FieldTool main menu.

(8) Select ○ 10. Quit Field Tool and click OK.


FieldTool
OK

FieldTool : Main Menu

Choose the one of these menu

● 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
○ 8. Image database service
○ 9. Output Image Operation
○ 10. Quit Field Tool

FR5H0159.EPS

➔ The FieldTool main menu will quit.

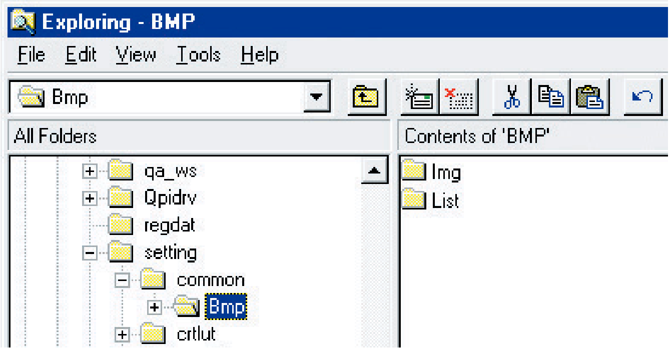
■ Marker replacement

Some new markers have been added for the new software version. Because registration sizes of the new markers are different from those of previous versions, the old markers cannot be used.
Replace therefore the markers as follows.

(1) Open the “C:\Program Files\Hi-cx\BMP” folder.

(2) Delete all folders from the “BMP” folder.

(3) Open the “CD-ROM drive:\setting\common\BMP” folder.


Exploring - BMP
File Edit View Tools Help
Bmp
All Folders
qa_ws
Qpidrv
regdat
setting
common
Bmp
crtlut
Contents of 'BMP'
Img
List

FR5H0220.EPS

(4) Copy all folders contained in the “BMP” folder of the CD-ROM drive onto “C:\Program Files\Hi-cx\BMP”.

(5) From the “C:\Program Files\Hi-cx\BMP” folder, select all folders copied in step (4) above and files contained in those folders.

(6) Right-click the mouse to select Properties from the menu.
➔ The properties dialog box appears.

(7) Deselect (☑ ➔ ☐) ☐ Read-only of the properties dialog box and click OK.

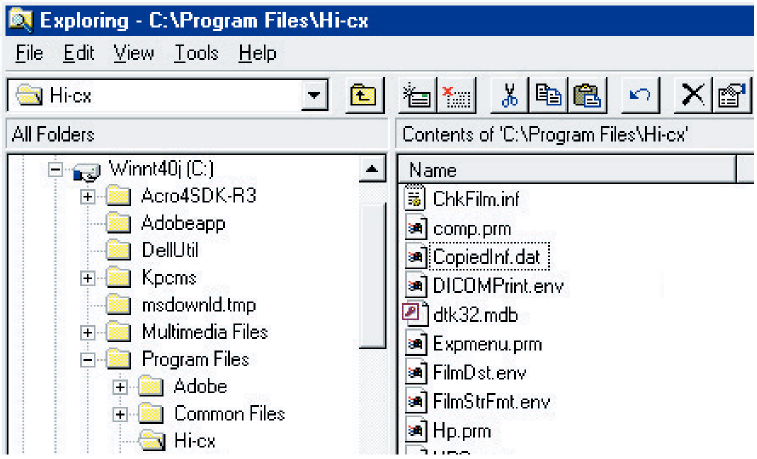
7.2 Editing the CopiedInf.dat File Used for Setting the Travel of Images Between Studies

If you drag and drop on the study list a study image to another study image, you can modify information (patient name, patient ID, etc.) attached to the dragged image. Use the CopiedInf.dat file to set up information attached to the image targeted for modification.
Described herein is the CopiedInf.dat file editing procedure.

(1) The following 11 items have been set up as the default. To modify these items, perform step 2. and thereafter.

- Patient Name
- Patient ID
- Date of Birth
- Sex
- Kanji Patient Name
- Patient Name in the alphabet
- Study Instance UID
- Study Date
- Study Time
- Accession Number
- Study Description

(2) Open the “C:\Program Files/Hi-cx” folder.


Exploring - C:\Program Files\Hi-cx
File Edit View Tools Help
Hi-cx
All Folders
Contents of 'C:\Program Files\Hi-cx'
Winnt40j (C:)
Acro4SDK-R3
Adobeapp
DellUtil
Kpcms
msdownld.tmp
Multimedia Files
Program Files
Adobe
Common Files
Hi-cx
Name
ChkFilm.inf
comp.prm
CopiedInf.dat
DICOMPrint.env
dtk32.mdb
Expmenu.prm
FilmDst.env
FilmStrFmt.env
Hp.prm

FR5H0221.EPS

(3) Use a text editor (such as NotePad) to open the “CopiedInf.dat” file.

(4) Modify information attached to the image.

Example of description

```
# CopiedInf.dat
#

00100010  --------- Patient Name
00100020  --------- Patient ID
00100030  --------- Date of Birth
00100040  --------- Sex
00112F10  --------- Kanji Patient Name
00112F11  --------- Patient Name in the Alphabet
0020000D  --------- Study Instance UID
00080020  --------- Study Date
00080030  --------- Study Time
00080050  --------- Accession Number
00081030  --------- Study Description

#end
```

Put the tag number here.

FR5H0238.EPS

◆ NOTES ◆

- *To add information attached to an image that is targeted for modification, put the tag number to the last line, as shown in the example above.*
- *When information attached to an image is not targeted for modification, delete the entire line, together with the tag number.*
- *A tag number consists of a group number and an element number (both four-digit hexadecimal figures), in a total of eight digits.*
- *To handle a line as a comment, add “#” to the line head.*

☞ For tag numbers inherent to information attached to images, see the “Conformance Statement”.

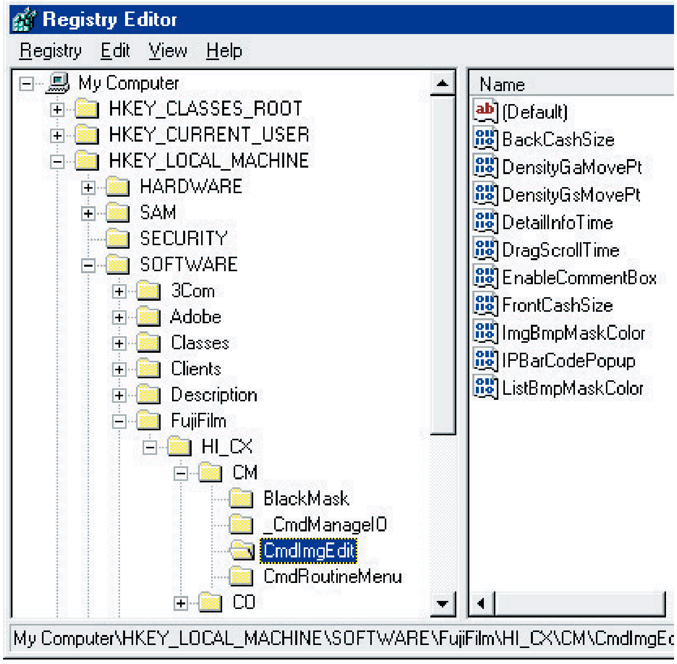
(5) Save and close the “CopiedInf.dat” file.

(6) Restart the PC.

7.3 Alternately Changing Between Display and Hide the Image Processing Parameter “Group Storage” Button

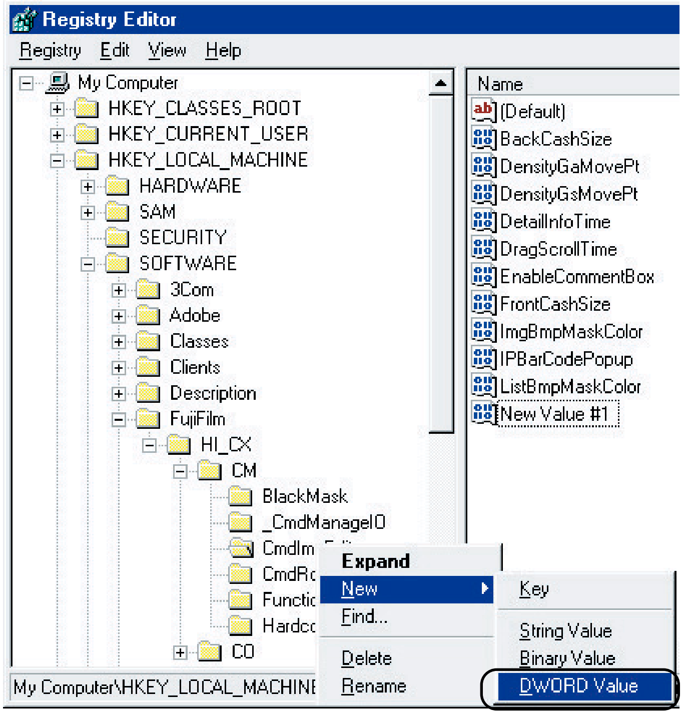
The “Group Storage” button allows you to use a function that stores image processing parameters (GP/MFP, GP/RP, DRC, TAS and PEM) at a time on all images selected. As the default, the “Group Storage” button is hidden. Described herein is the procedure to display the “Group Storage” button.

(1) Open the “HKEY_LOCAL_MACHINE/SOFTWARE/Fujifilm/HI_CX/CM/CmdImgEdit” folder on the “Registry Editor” window.


Registry Editor
Registry Edit View Help
My Computer
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HARDWARE
SAM
SECURITY
SOFTWARE
3Com
Adobe
Classes
Clients
Description
FujiFilm
HI_CX
CM
BlackMask
_CmdManageIO
CmdImgEdit
CmdRoutineMenu
CO
Name
(Default)
BackCashSize
DensityGaMovePt
DensityGsMovePt
DetailInfoTime
DragScrollTime
EnableCommentBox
FrontCashSize
ImgBmpMaskColor
IPBarCodePopup
ListBmpMaskColor
My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\FujiFilm\HI_CX\CM\CmdImgE

FR5H0222.EPS

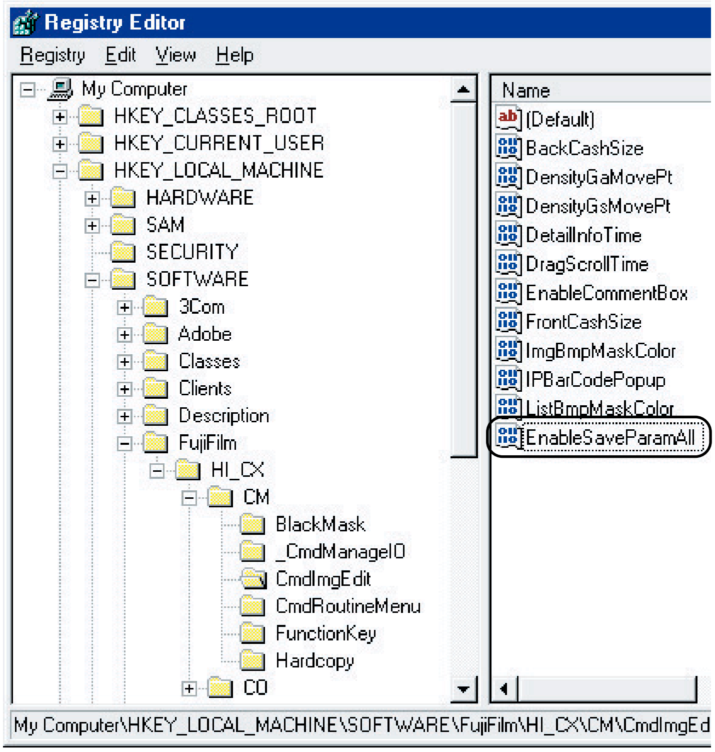
(2) Right-click the “CmdImgEdit” folder. Select “New” from the menu and then “DWORD Value (D)” for the “Name” column.


Registry Editor
Registry Edit View Help
My Computer
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HARDWARE
SAM
SECURITY
SOFTWARE
3Com
Adobe
Classes
Clients
Description
FujiFilm
HI_CX
CM
BlackMask
_CmdManageIO
CmdIm
CmdRo
Functio
Hardco
CO
Name
(Default)
BackCashSize
DensityGaMovePt
DensityGsMovePt
DetailInfoTime
DragScrollTime
EnableCommentBox
FrontCashSize
ImgBmpMaskColor
IPBarCodePopup
ListBmpMaskColor
New Value #1
Expand
New
Find...
Delete
Rename
Key
String Value
Binary Value
DWORD Value
My Computer\HKEY_LOCAL_MACHINE

FR5H0223.EPS

➔ A new DWORD value, “New Value #1” will be displayed in the name column.

(3) Rewrite “New Value #1” to “EnableSaveParamAll”.


Registry Editor
Registry Edit View Help
My Computer
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HARDWARE
SAM
SECURITY
SOFTWARE
3Com
Adobe
Classes
Clients
Description
FujiFilm
HI_CX
CM
BlackMask
_CmdManageIO
CmdImgEdit
CmdRoutineMenu
FunctionKey
Hardcopy
CO
Name
(Default)
BackCashSize
DensityGaMovePt
DensityGsMovePt
DetailInfoTime
DragScrollTime
EnableCommentBox
FrontCashSize
ImgBmpMaskColor
IPBarCodePopup
ListBmpMaskColor
EnableSaveParamAll

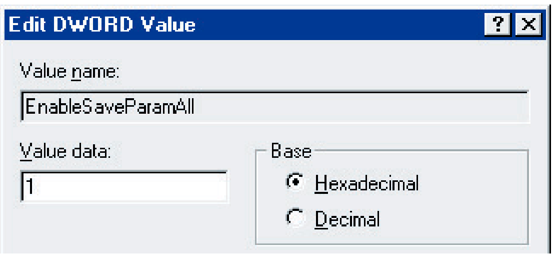
My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\FujiFilm\HI_CX\CM\CmdImgEd

FR5H0224.EPS

(4) Double-click EnableSaveParamAll .

➔ The “Edit DWORD Value” window opens.

(5) Enter “1” in Value data: and click OK .


Edit DWORD Value
?
X

Value name: EnableSaveParamAll

Value data: 1

Base

● Hexadecimal

○ Decimal

FR5H0225.EPS

➔ You are then returned to the “Registry Editor” window.

(6) Click ☒ on the “Registry Editor” window.

➥ *REFERENCE*

To hide the “Group Storage” button, specify “0” for the registry key value.

7.4 Setting Up the Security Function

The QA-WS security function is explained herein.

■ Overview

With the A05 version software, a function that enables to restrict operations available on the QA-WS according to user authority has been added.

The user authority consists of the two types: one for servicing and the other for users. The authority for servicing is used by service personnel to register hospital administrator authority for the first time. The authority for users comprises of the three types: hospital administrator (administrator), general (Modifier) and only for viewing (Viewer).

The table below shows the relationship between user authorities and possible operations.

	User authority			Servicing authority
	Only for viewing (Viewer)	General (Modifier)	Hospital administrator (administrator)	For servicing (fieldengineer)
Account registration	Not allowed	Not allowed	Allowed	Allowed
Operations	Viewing only	All operations possible.	All operations possible.	All operations possible.

FR5H0236.EPS

■ Setup procedure

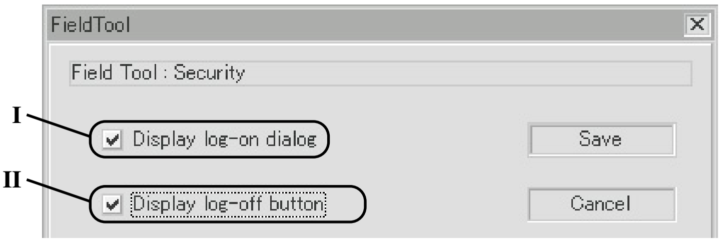
● FieldTool setup

Setup procedure used for displaying the logon dialog window is explained below.
The logon dialog window will not be displayed as the default.

(1) Start up FieldTool.

(2) Display “Main Menu>7.Appearance for routine usage>14.Security” window.

(3) Make the following settings.



FieldTool

Field Tool : Security

I ☑ Display log-on dialog

II ☑ Display log-off button

FR5H0226.EPS

I. To display the logon dialog when starting the QA-WS, check (☐ ➔ ☑) here.
II. To display the “logoff” button at the lower left corner of the window, check (☐ ➔ ☑) here.

(4) Save the setup data and then return to the “Main Menu” window.

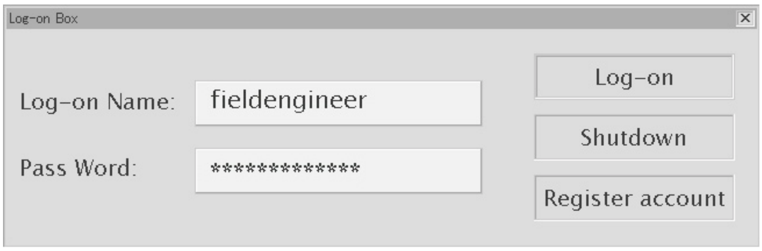
(5) Shut down FieldTool.

● Registration of hospital administrator account

Use the servicing authority to register hospital administrator account.
If the hospital administrator account is not set up accordingly, users including the hospital administrator cannot use the QA-WS system.

(1) Start up the QA-WS.
➔ After a while, the logon window opens.

(2) Enter "fieldengineer" both in the User name and Password boxes and then click Register account .


Log-on Box

Log-on Name: fieldengineer

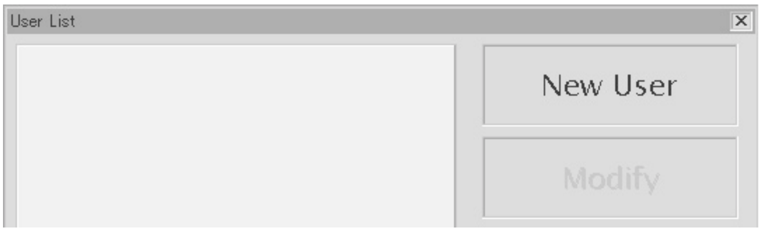
Pass Word: *************

Log-on
Shutdown
Register account

FR5H0227.EPS

➔ The "User List" window opens.

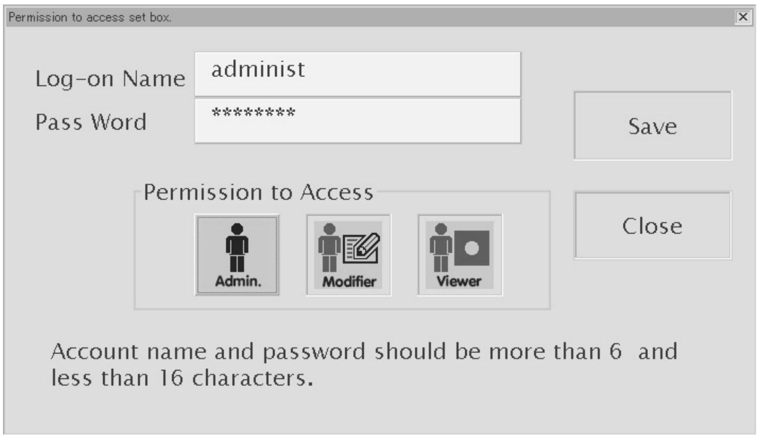
(3) Click New User .


User List
New User
Modify

FR5H0228.EPS

➔ The "Permission to access set box" window opens.

(4) Enter the hospital administrator's user name and password.


Permission to access set box.

Log-on Name administ

Pass Word ********

Account name and password should be more than 6 and less than 16 characters.

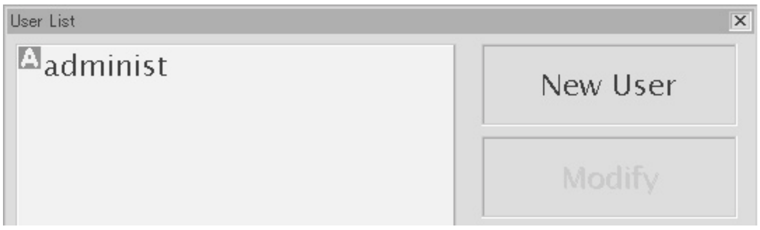
Save
Close
Permission to Access
Admin.
Modifier
Viewer

FR5H0229.EPS

(5) Select Admin. .

(6) Click Save .

➔ You are then returned to the “User List” window.



User List

administ

FR5H0230.EPS

(7) Click Close .

➔ You are then returned to the “Log-on” window.

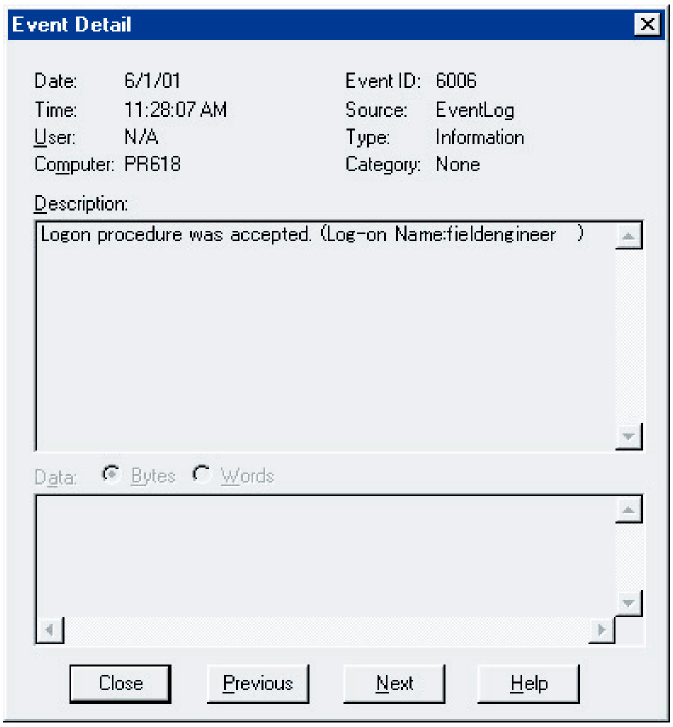
(8) Make sure that you can log onto the system with the hospital administrator’s user name.

If you cannot log onto the system, check the user name and password entered.

■ History display

It is possible to confirm users' login/logout history on the event log that is available on the application side. Login and logout examples are shown below.

● Logon



Event Detail

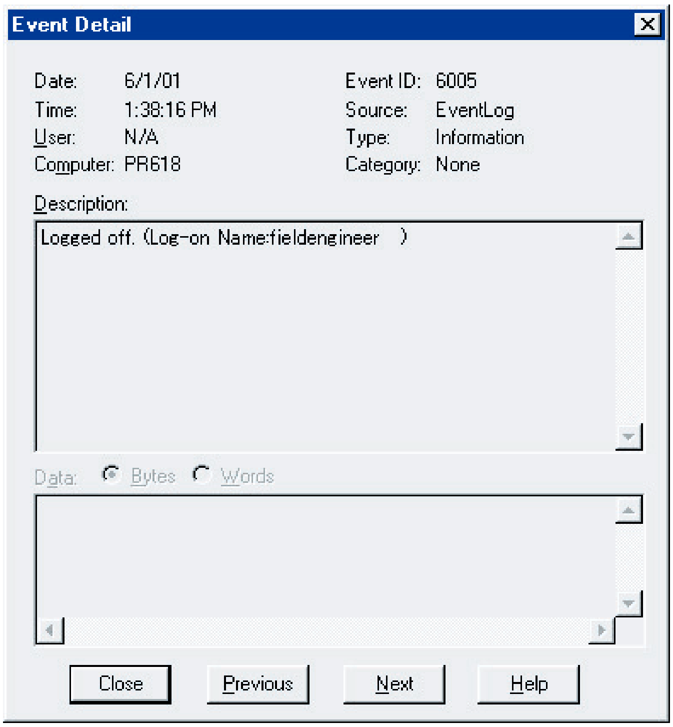
Date: 6/1/01
Time: 11:28:07 AM
User: N/A
Computer: PR618
Event ID: 6006
Source: EventLog
Type: Information
Category: None

Description:
Logon procedure was accepted. (Log-on Name:fieldengineer)

Data:
○ Bytes
○ Words
Close
Previous
Next
Help

FR5H0231.EPS

● Login



Event Detail

Date: 6/1/01
Time: 1:38:16 PM
User: N/A
Computer: PR618
Event ID: 6005
Source: EventLog
Type: Information
Category: None

Description:
Logged off. (Log-on Name:fieldengineer)

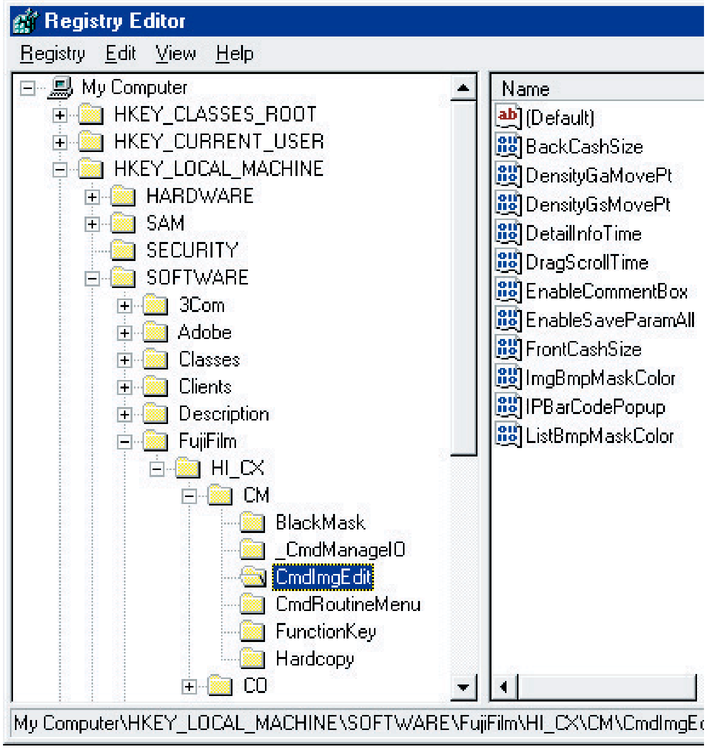
Data:
○ Bytes
○ Words
Close
Previous
Next
Help

FR5H0232.EPS

7.5 Whether Displaying or Hiding the Barcode Number

When an IP is found on the screen to be scratched, the relevant IP barcode number can be displayed on the study list allowing the user to determine which IP is scratched. As the default, the IP barcode number is set to be displayed. Described herein is the procedure to hide it.

(1) Open the “HKEY_LOCAL_MACHINE/SOFTWARE/Fujifilm/HI_CX/CM/CmdImgEdit” folder on the “Registry Editor” window.


Registry Editor
Registry
Edit
View
Help
My Computer
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HARDWARE
SAM
SECURITY
SOFTWARE
3Com
Adobe
Classes
Clients
Description
FujiFilm
HI_CX
CM
BlackMask
_CmdManageIO
CmdImgEdit
CmdRoutineMenu
FunctionKey
Hardcopy
CO
Name
(Default)
BackCashSize
DensityGaMovePt
DensityGsMovePt
DetailInfoTime
DragScrollTime
EnableCommentBox
EnableSaveParamAll
FrontCashSize
ImgBmpMaskColor
IPBarCodePopup
ListBmpMaskColor

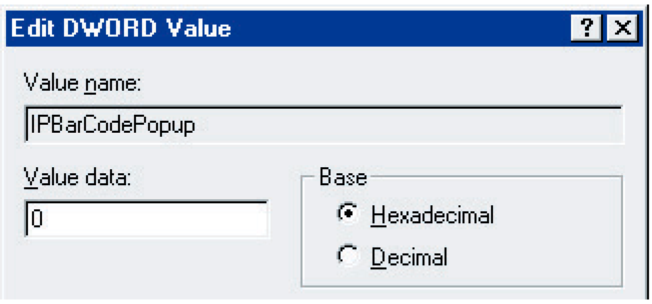
My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\FujiFilm\HI_CX\CM\CmdImgE

FR5H0233.EPS

(2) Double-click IPBarCodePopup in the name column.

➔ The “Edit DWORD Value” window opens.

(3) Enter “0” in Value data: and click OK.


Edit DWORD Value
?
✕

Value name:
IPBarCodePopup

Value data:
0

Base
● Hexadecimal
○ Decimal

FR5H0234.EPS

➔ You are then returned to the “Registry Editor” window.

(4) Click ☒ on the “Registry Editor” window.

7.6 Reissuing the SOP-Instance-UID Number When Image Information is Changed

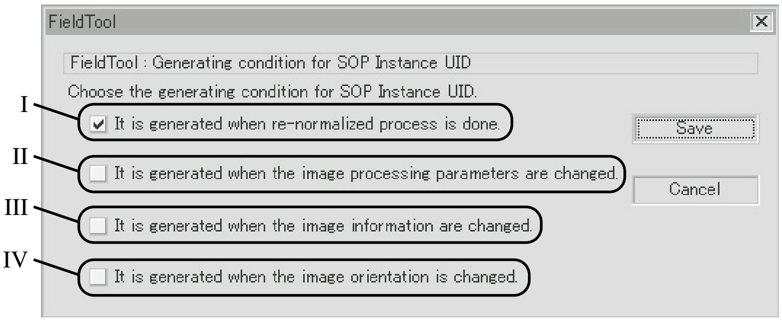
When the following image information items have been changed on the QA-WS, use the procedure explained below to specify whether or not to reissue the SOP-Instance-UID that is different from that before changing.

- Renormalization processing (changes in exposure menus or S/L values)
- Changing image processing parameters (GP/MFP, GP/RP, DRC, TAS and PEM)
- Changing image information items (patient name, patient ID, etc.)
- Changing image rotation/reversal information

(1) Start up FieldTool.

(2) Display “Main Menu>7.Appearance for routine usage>13.Generation condition for SOP Instance UID” window.

(3) Check (☐ ➔ ☑) items for which the SOP-Instance-UID is to be reissued.



FieldTool

FieldTool : Generating condition for SOP Instance UID

Choose the generating condition for SOP Instance UID.

☑ It is generated when re-normalized process is done.

☐ It is generated when the image processing parameters are changed.

☐ It is generated when the image information are changed.

☐ It is generated when the image orientation is changed.

FR5H0235.EPS

Item	Image information change item	Default
I	Renormalization processing	☑ : To reissue.
II	Image processing parameters	☐ : Not to reissue.
III	Image information	☐ : Not to reissue.
IV	Image rotation/reversal information	☐ : Not to reissue.

FR5H0237.EPS

(4) Save the setup data and then return to the “Main Menu” window.

(5) Shut down FieldTool.

Appendix 8. A06 Version Software

8.1 Software Version Upgrade to A06

Make the following setups according to order shown below.

- Software installation
- File copying
- Registry settings
- Image information file conversion
- Database re-building
- Marker replacement [as necessary]

❍ Have the following ready to use.

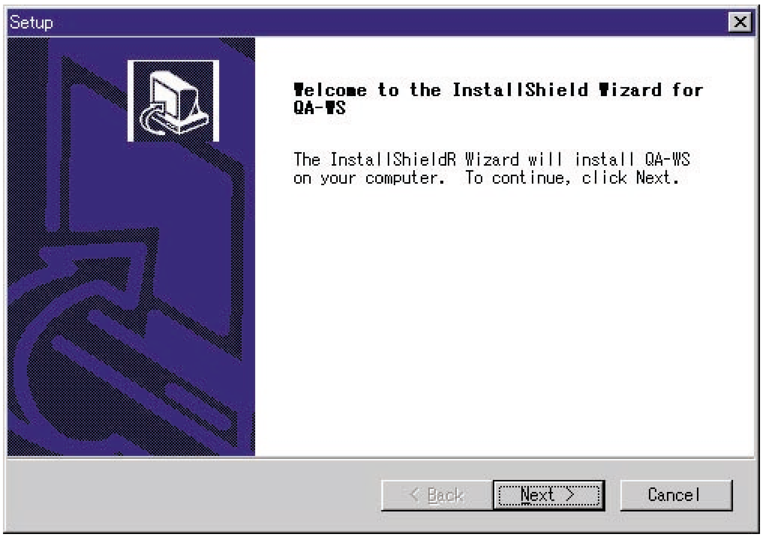
- QA-WS A06 version software installation CD-ROM ("AP-CD" hereinafter)

■ Software installation

Use the procedure described herein to install the A06 version software.

(1) Insert the AP-CD into the CD-ROM drive.
➔ After a while, the "Setup" screen appears.

(2) Click Next >.

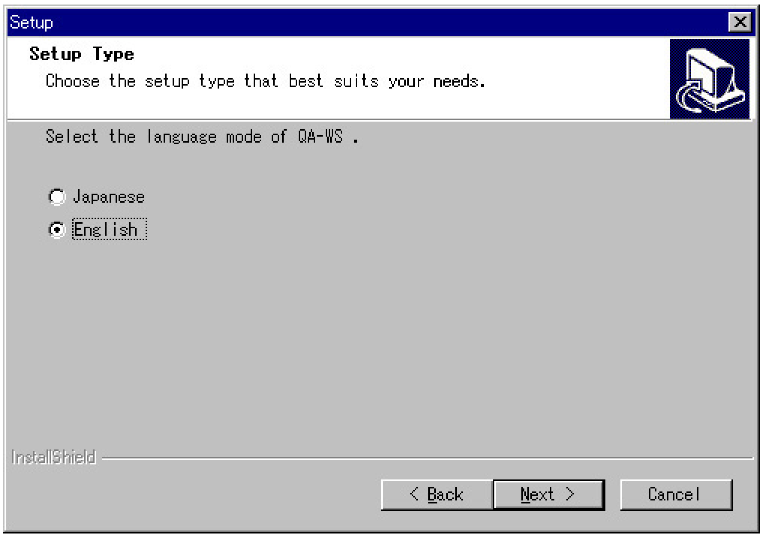


Welcome to the InstallShield Wizard for QA-WS

The InstallShieldR Wizard will install QA-WS on your computer. To continue, click Next.

FR5H0201.EPS

(3) Select "Japanese" or "English" for the language to be used and click Next >.



Setup

Setup Type

Choose the setup type that best suits your needs.

Select the language mode of QA-WS .

○ Japanese

● English

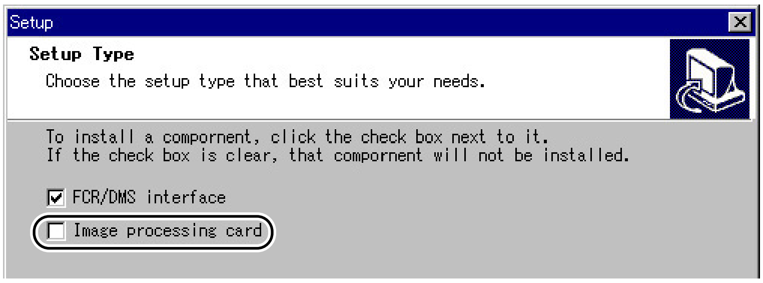
FR5H0202.EPS

(4) Check the box (☐ → ☑) of the component to be used and click Next >.

- ☐ FCR/DMS interface: When using the E-i/f
- ☐ Image processing card : When using the image processing board

◆ NOTE ◆

When the image processing board has been mounted on the QA-WS, check (☐ → ☑) the box of the ☐ Image processing card *.*



Setup

Setup Type

Choose the setup type that best suits your needs.

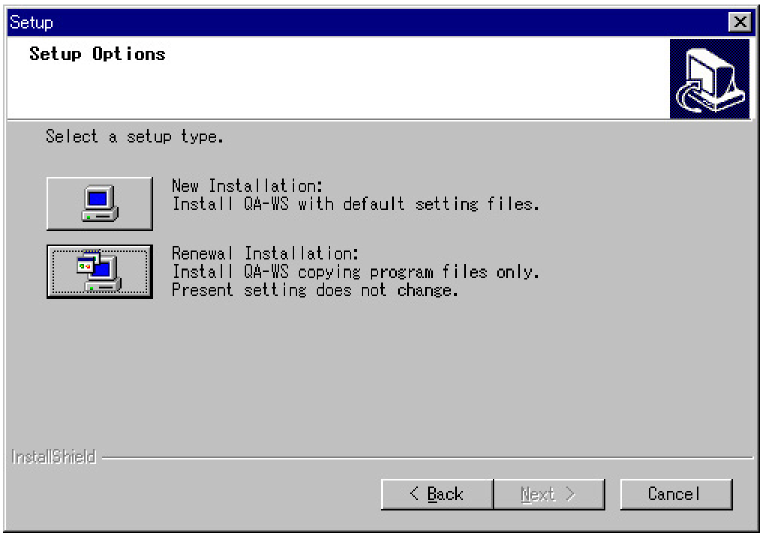
To install a compornent, click the check box next to it.
If the check box is clear, that compornent will not be installed.

☑ FCR/DMS interface

☐ Image processing card

FR5H0203.EPS

(5) For the setup type, click 🖥.



Setup

Setup Options

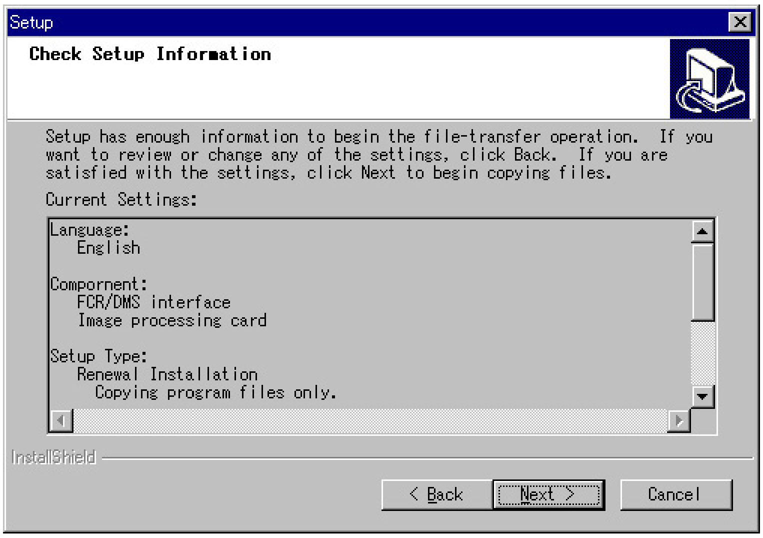
Select a setup type.

New Installation:
Install QA-WS with default setting files.

Renewal Installation:
Install QA-WS copying program files only.
Present setting does not change.

FR5H0204.EPS

(6) Make sure that the content of the "Current Settings:" is as actually has been specified and click Next >.



Check Setup Information

Setup has enough information to begin the file-transfer operation. If you want to review or change any of the settings, click Back. If you are satisfied with the settings, click Next to begin copying files.

Current Settings:

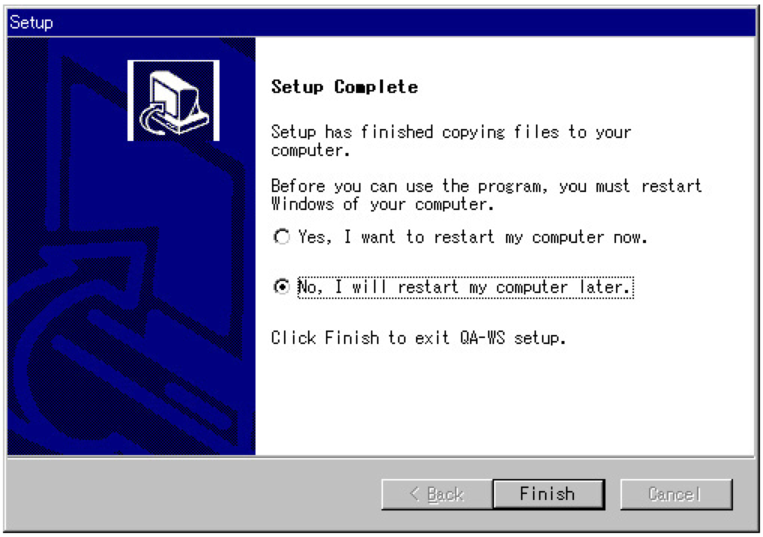
```
Language:
   English

Compornent:
   FCR/DMS interface
   Image processing card

Setup Type:
   Renewal Installation
     Copying program files only.
```

FR5H0205.EPS

➔ The “Information” screen appears.

(7) Click OK.

(8) Select ● No, I will restart my computer later. and click Finish.



Setup Complete

Setup has finished copying files to your computer.

Before you can use the program, you must restart Windows of your computer.

○ Yes, I want to restart my computer now.

● No, I will restart my computer later.

Click Finish to exit QA-WS setup.

FR5H0207.EPS

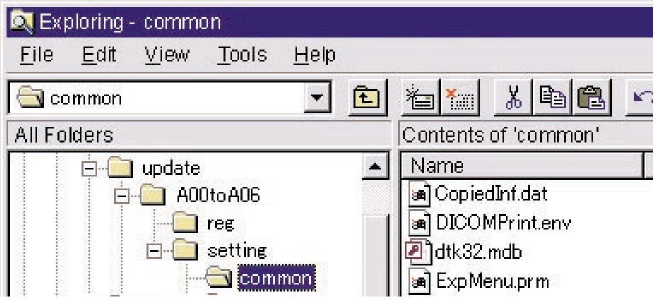
■ File copying

Copy files from the AP-CD to the hard disk as necessary.
To upgrade the software version from A05 to A06, you need not to perform the procedure described herein.

(1) Open folders as shown in the table below, as necessary. Note that the folder to be opened differs depending on the software version that serves as the source for upgrading.

Source software version	Folder to be opened
A00	CD-ROM drive:\update\A00toA06\setting\
A01-00, A01, A02-00	CD-ROM drive:\update\A01toA06\setting\
A02-01, A02-02, A02-03, A02, A03-00, A03-01	CD-ROM drive:\update\A02toA06\setting\
A03, Y00, A04-00	CD-ROM drive:\update\A03toA06\setting\
A04-01, A04-02	CD-ROM drive:\update\A04-01toA06\setting\
A04	CD-ROM drive:\update\A04toA06\setting\
A05-00	CD-ROM drive:\update\A05-00toA06\setting\

(2) Copy to the“C:\Program Files\Hi-cx” folder all the files contained in the “common” folder opened at step (1) above.

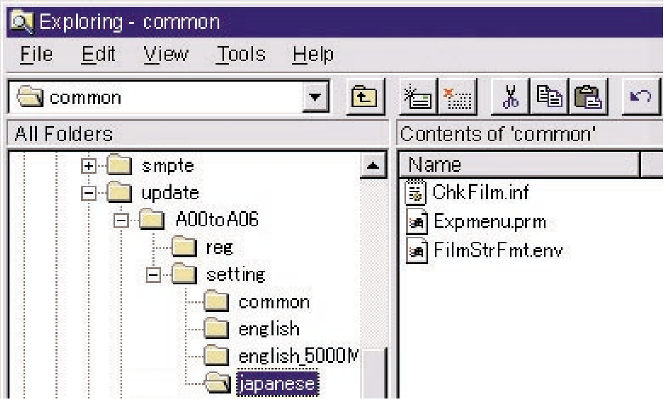

Exploring - common
File Edit View Tools Help
common
All Folders
update
A00toA06
reg
setting
common
Contents of 'common'
Name
CopiedInf.dat
DICOMPrint.env
dtk32.mdb
ExpMenu.prm

FR5H0208.EPS

(3) Copy all the files contained in the "japanese" or "english" folder or the "USA" folder, opened in step (1) above, onto the "C:\Program Files\Hi-cx" folder.

▼ *SUPPLEMENT* ▲

Copy files from the "japanese" folder if the AP used is in Japanese and the "english" folder if the AP used is in English. If the AP used is in English (USA), copy files from the "USA " folder because image parameters used are different from others.

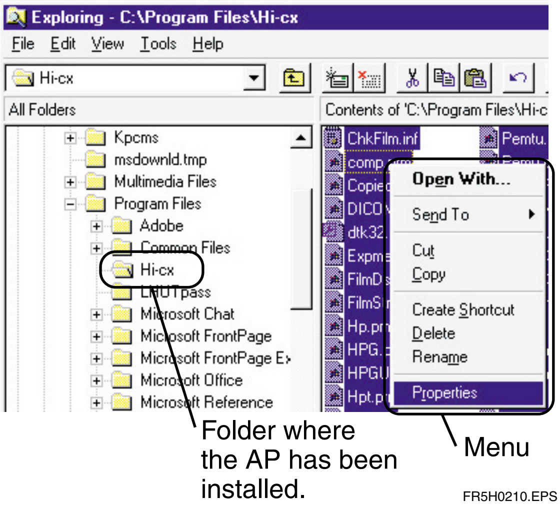

Exploring - common
File Edit View Tools Help
common
All Folders
smpte
update
A00toA06
reg
setting
common
english
english 5000M
japanese
Contents of 'common'
Name
ChkFilm.inf
Expmenu.prm
FilmStrFmt.env

FR5H0209.EPS

(4) When handling built-in system images using the English AP (USA), copy all the files contained in the "5501" folder immediately below the USA folder, in addition to those said in step above, onto the "C:\Program Files\Hi-cx" folder.

(5) Select from the “C:\Program Files\Hi-cx” folder all the files that have been copied at steps (2), (3) and (4) above.

(6) Right-click the mouse to select Properties from the menu.

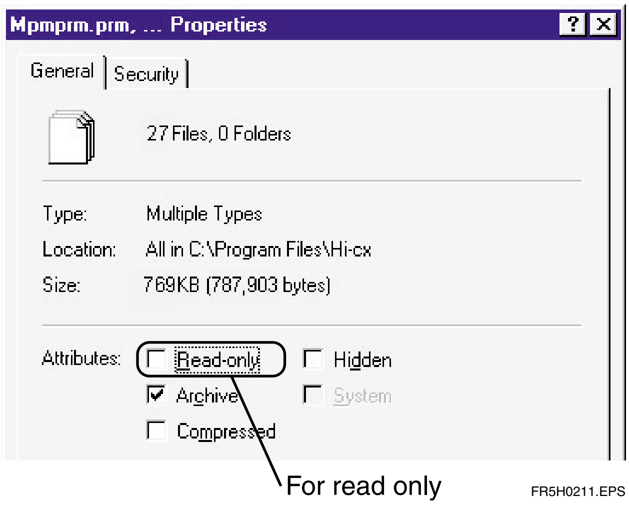

Exploring - C:\Program Files\Hi-cx
File Edit View Tools Help
Hi-cx
All Folders
Contents of 'C:\Program Files\Hi-c
Kpcms
msdownld.tmp
Multimedia Files
Program Files
Adobe
Common Files
Hi-cx
LBUTpass
Microsoft Chat
Microsoft FrontPage
Microsoft FrontPage Ex
Microsoft Office
Microsoft Reference
ChkFilm.inf
Pemtu.
Open With...
Send To
Cut
Copy
Create Shortcut
Delete
Rename
Properties

Folder where the AP has been installed.

Menu

FR5H0210.EPS

(7) Uncheck ☑ Read-only of the [Properties] dialog box and click OK.


Mpmprm.prm, ... Properties
General
Security

27 Files, 0 Folders

Type: Multiple Types

Location: All in C:\Program Files\Hi-cx

Size: 769KB (787,903 bytes)

Attributes: ☐ Read-only ☐ Hidden ☑ Archive ☐ System ☐ Compressed

For read only

FR5H0211.EPS

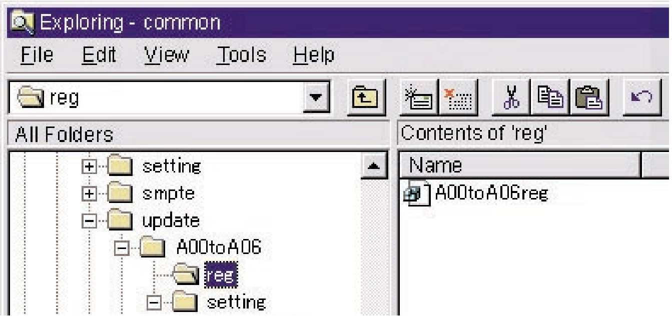
■ Registry settings

Double-click the registry file contained in the AP-CD to set up the registry.

To upgrade the software version from A05 to A06, you need not to perform the procedure described herein.

(1) Open the folders as follows.

- To upgrade software version from A00 to A06:
  “CD-ROM drive:\update\A00toA06\reg”
- To upgrade software version from A01-00, A01 or A02-00 to A06:
  “CD-ROM drive:\update\A01toA06\reg”
- To upgrade software version from A02-01, A02-02, A02-03, A02, A03-00 or A03-01 to A06:
  “CD-ROM drive:\update\A02toA06\reg”
- To upgrade software version from A03, Y00 or A4-00 to A06:
  “CD-ROM drive:\update\A03toA06\reg”
- To upgrade software version from A4-01 or A4-02 to A06:
  “CD-ROM drive:\update\A04-01toA06\reg”
- To upgrade software version from A05-00 to A06:
  “CD-ROM drive:\update\A05-00toA06\reg”


Exploring - common
File
Edit
View
Tools
Help
reg
All Folders
setting
smpte
update
A00toA06
reg
setting
Contents of 'reg'
Name
A00toA06reg

FR5H0212.EPS

(2) Double-click the registry file contained in the "reg" folder.

➔ A screen appears indicating the completion of registry settings.

(3) Click OK.

▼ *SUPPLEMENT* ▲

When there are a multiple number of registry files in the "reg" folder, repeat steps (2) and (3) for all the files.

■ Image information file conversion

File conversion is necessary because the content of the image information file differs from that of the previous software version.

(1) Open the “C:\Program Files\Hi-cx” folder.

(2) Double-click ImgInfoConv.

➔ The converter starts up.

(3) Click Convert.

➔ A screen that indicates the completion of conversion appears.

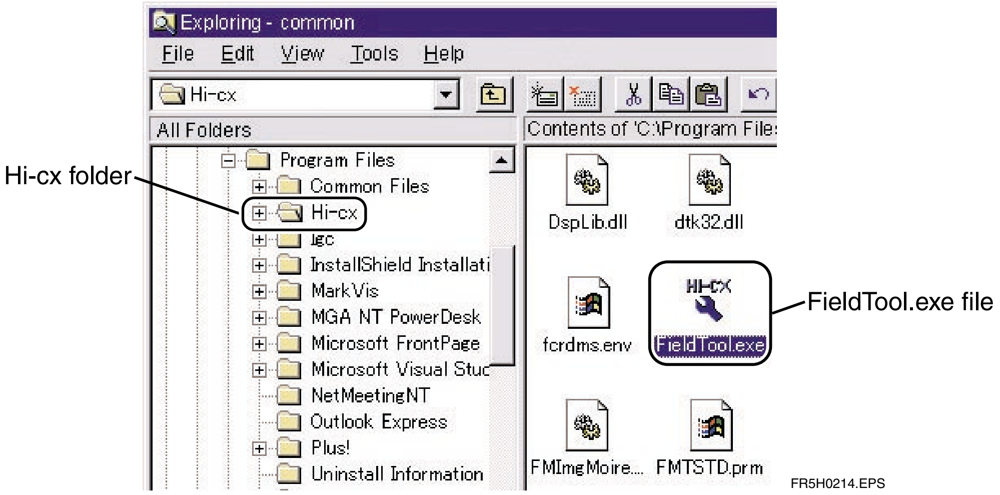
(4) Click OK.

■ Database re-building

When the AP version has been upgraded, the database should be re-built.

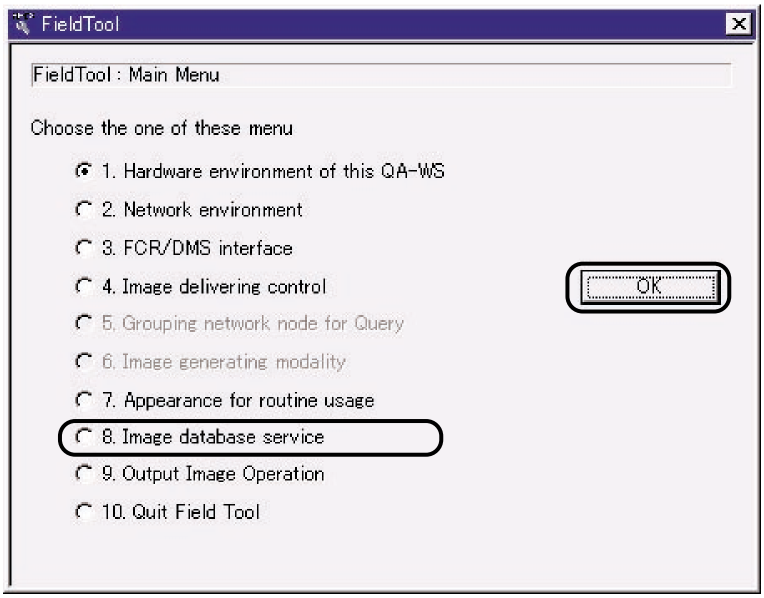
(1) Open the “C:\Program Files\Hi-cx” folder.

(2) Double-click the FieldTool.e... file.


Exploring - common
File
Edit
View
Tools
Help
Hi-cx
All Folders
Contents of 'C:\Program File
Program Files
Common Files
Hi-cx
Igc
InstallShield Installati
MarkVis
MGA NT PowerDesk
Microsoft FrontPage
Microsoft Visual Stuc
NetMeetingNT
Outlook Express
Plus!
Uninstall Information
DspLib.dll
dtk32.dll
fcrdms.env
FieldTool.exe
FMImgMoire....
FMTSTD.prm
Hi-cx folder
FieldTool.exe file

FR5H0214.EPS

(3) Select ○ 8. Image database service and click OK.



FieldTool

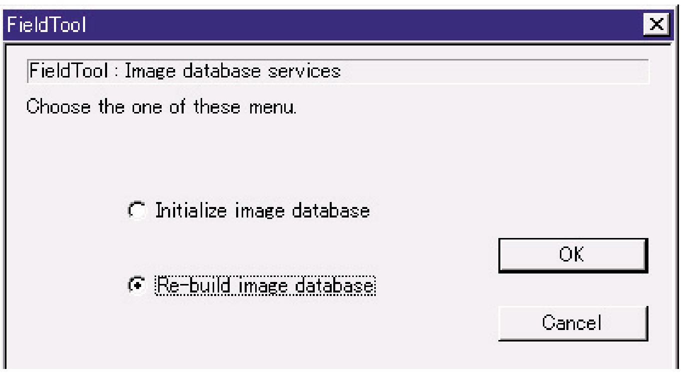
FieldTool : Main Menu

Choose the one of these menu

- ● 1. Hardware environment of this QA-WS
- ○ 2. Network environment
- ○ 3. FCR/DMS interface
- ○ 4. Image delivering control
- ○ 5. Grouping network node for Query
- ○ 6. Image generating modality
- ○ 7. Appearance for routine usage
- ○ 8. Image database service
- ○ 9. Output Image Operation
- ○ 10. Quit Field Tool

FR5H0215.EPS

(4) Select ● Re-build image database and click OK.



FieldTool

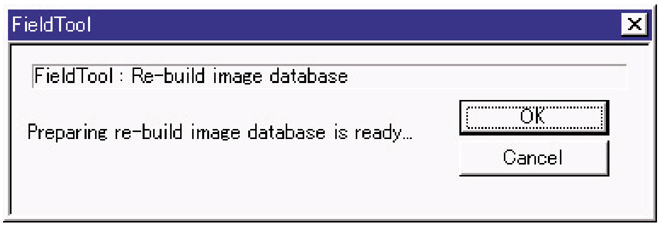
FieldTool : Image database services

Choose the one of these menu.

- ○ Initialize image database
- ● Re-build image database

FR5H0216.EPS

(5) Click OK.



FieldTool

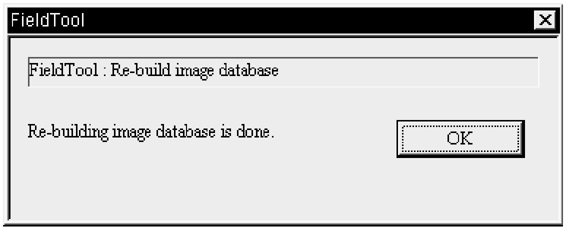
FieldTool : Re-build image database

Preparing re-build image database is ready...

FR5H0217.EPS

➔ Database re-building will then be processed.

(6) Click OK.


FieldTool
OK

FieldTool : Re-build image database

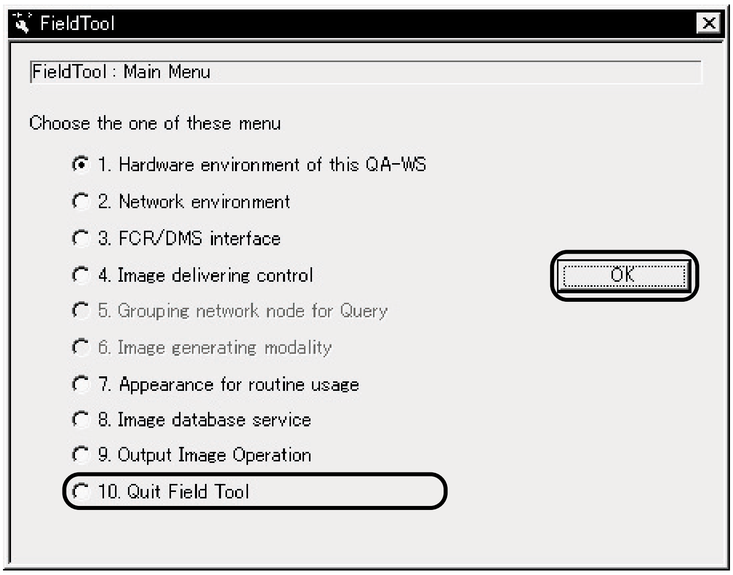
Re-building image database is done.

FR5H0158.EPS

(7) Click Cancel several times.

➔ The system returns to the FieldTool main menu.

(8) Select ○ 10. Quit Field Tool and click OK.


FieldTool
FieldTool : Main Menu
Choose the one of these menu
● 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
○ 8. Image database service
○ 9. Output Image Operation
○ 10. Quit Field Tool
OK

FR5H0159.EPS

➔ The FieldTool main menu will quit.

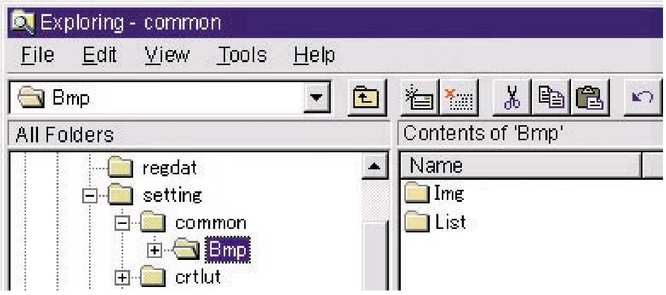
■ Marker replacement

When the AP version of A02-02 or earlier was used, replace the marker following the procedure described below.

(1) Open the “C:\Program Files\Hi-cx\BMP” folder.

(2) Delete all folders from the “BMP” folder.

(3) Open the “CD-ROM drive:\setting\common\BMP” folder.


Exploring - common
File
Edit
View
Tools
Help
Bmp
All Folders
Contents of 'Bmp'
regdat
setting
common
Bmp
crtlut
Name
Img
List

FR5H0220.EPS

(4) Copy all folders contained in the “BMP” folder of the CD-ROM drive onto “C:\Program Files\Hi-cx\BMP”.

(5) From the “C:\Program Files\Hi-cx\BMP” folder, select all folders copied in step (4) above and files contained in those folders.

(6) Right-click the mouse to select Properties from the menu.
➔ The Properties dialog box appears.

(7) Deselect (☑ ➔ ☐) ☐ Read-only of the Properties dialog box and click OK.

8.2 Setting the Periodic Image Input/Output Monitoring Function

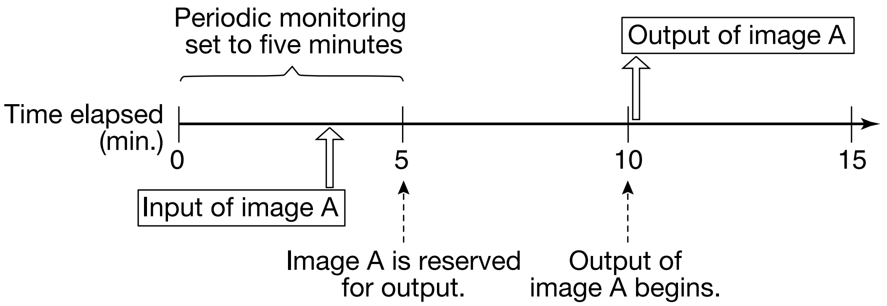
The A06 version software enables periodic image input/output monitoring.
This function is to monitor image input periodically during automatic image distribution process, and then make distributions of images thus input while they are being monitored periodically.

■ Activation of periodic monitoring and setup of the time for periodic monitoring

The periodic monitoring function can be activated on the AP's environment setup dialog for each target device for automatic image distribution. Furthermore, the time for periodic monitoring can be set up on the same dialog. The default time set up at installation is five minutes.

☞ Function setup procedure on the environment setup dialog
→ "QA-WS User's Manual"

Illustrated below is the processing sequence with the default time set to five minutes.


Periodic monitoring set to five minutes
Output of image A
Time elapsed (min.)
0
5
10
15
Input of image A
Image A is reserved for output.
Output of image A begins.

FR5H0239.EPS

As illustrated above, if an image is input between zero and five minutes, image output begins at ten minutes, or image output begins about five minutes later, at the earliest and about ten minutes later, at the latest, after the image has been input.

This processing enables a function that retards the time required for image output in the range of the time set up for periodic monitoring (at the earliest) and the time twice as long as the setup time (at the latest).

■ Setup of the number of periodic monitoring before starting image output

When image output has been reserved, the number of periodic monitoring after which the monitoring process is to be started can be set up on the registry. Examples of actual operation is shown below when the registry is set up accordingly.

<Examples>

- Registry value = 1 : After image output has been reserved, it starts at first periodic monitoring. (At ten minutes in the illustration above.)
- Registry value = 2 : After image output has been reserved, it starts at second periodic monitoring. (At 15 minutes in the illustration above.)

At AP installation, this registry does not exist. In such an instance, the operation will be the same as when "1" was set for the registry value .

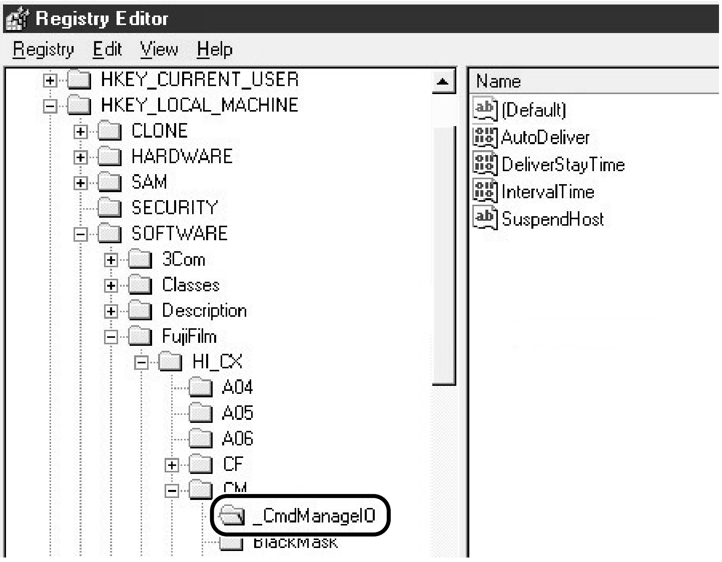
◆ *NOTE* ◆

Do not set up "0" for the registry value. Because "0" is not assumed for the operating AP, the system function does not work properly.

For the use of this function, you have to check the user for the desired operation, and then perform setups and operational verification appropriately.

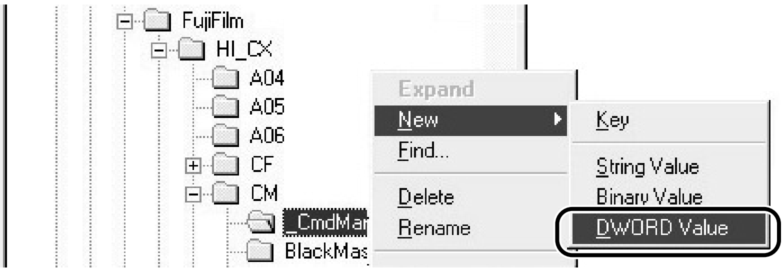
Described below is the registry setup procedure.

(1) Use the Registry Editor to open the "HKEY_LOCAL_MACHINE\SOFTWARE\FujiFilm\HI_CX\CM\CmdManagel0" folder.


Registry Editor
Registry
Edit
View
Help
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
CLONE
HARDWARE
SAM
SECURITY
SOFTWARE
3Com
Classes
Description
FujiFilm
HI_CX
A04
A05
A06
CF
CM
_CmdManagel0
BlackMask
Name
(Default)
AutoDeliver
DeliverStayTime
IntervalTime
SuspendHost

FR5H0222.EPS

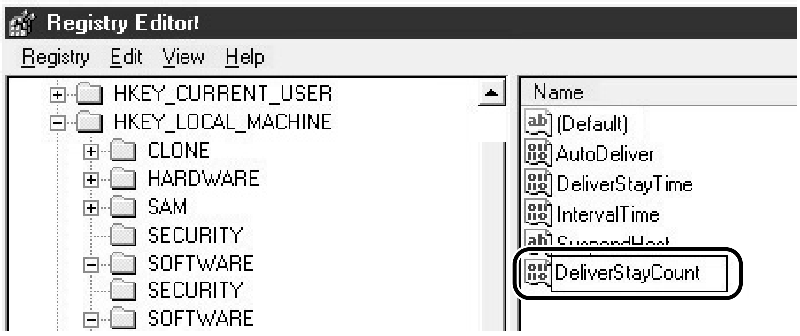
(2) Right-click the "_CmdManagel0" folder to select "New", then "DWORD Value".


FujiFilm
HI_CX
A04
A05
A06
CF
CM
_CmdMar
BlackMas
Expand
New
Find...
Delete
Rename
Key
String Value
Binary Value
DWORD Value

FR5H0223.EPS

➔ The new DWORD value ("New Value #1") will be displayed in the "Name" box.

(3) Rewrite "New Value #1" to "DeliverStayCount".

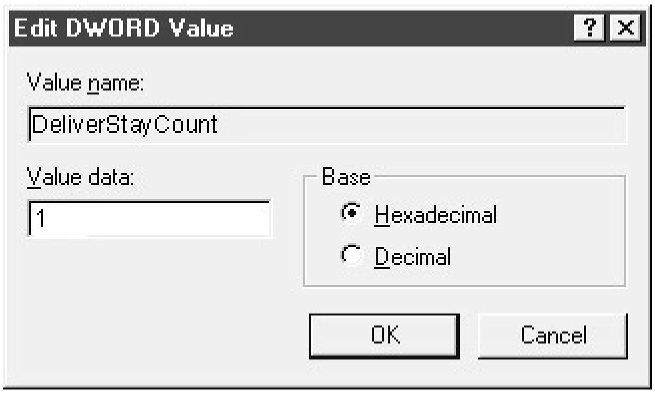

Registry Editor
Registry
Edit
View
Help
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
CLONE
HARDWARE
SAM
SECURITY
SOFTWARE
SECURITY
SOFTWARE
Name
(Default)
AutoDeliver
DeliverStayTime
IntervalTime
SuspendHost
DeliverStayCount

FR5H0224.EPS

(4) Double-click DeliverStayCount.

➔ The "Edit DWROD Value" window opens.

(5) Enter a desired setup value in the "Value data:" box and click OK.



Edit DWORD Value

Value name: DeliverStayCount

Value data: 1

Base
● Hexadecimal
○ Decimal

FR5H0225EPS

➔ You are returned to the "Registry Editor" window.

(6) Click ☒ on the "Registry Editor" window.

8.3 Setting the Display Gradation for the Modality LUT

Some of the images transmitted from the QA-WS that is connected with the KODAK Viewer presented a symptom of image quality appearing different on it.

Such problem can be attributed to the fact that there are discrepancies between the QA-WS and the KODAK Viewer in interpreting gradation corrections used when those images are displayed.

To prevent such problem from occurring with the A06 version QA-WS software, the Modality LUT was enabled to have image output gradation on film be set up for information incidental to an image transmitted from the QA-WS.

❍ Have the following ready for use.

- A06 version QA-WS software installation CD-ROM (abbreviated to "AP-CD")

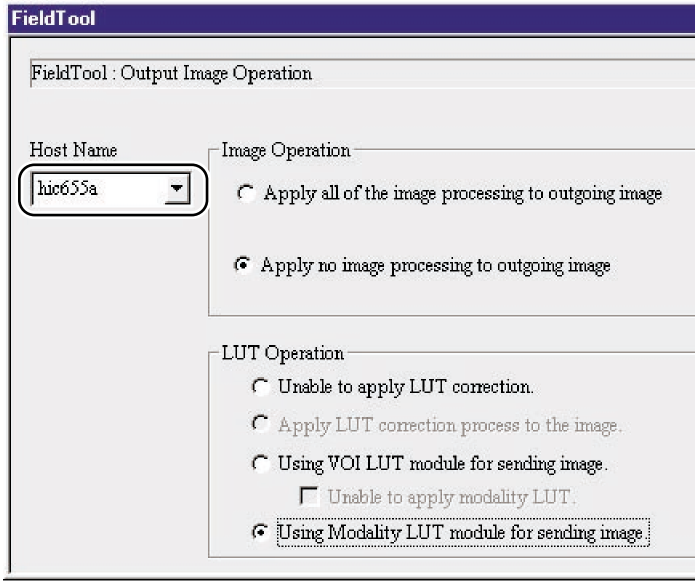
Presented herein is the procedure to be performed.

■ Setup for using the Modality LUT (FieldTool)

(1) Launch FieldTool.

(2) Display the "Main Menu>9. Output Image Operation" window.

(3) Select host name of the target device for image distribution.



FieldTool

FieldTool : Output Image Operation

Host Name: hic655a

Image Operation
- ○ Apply all of the image processing to outgoing image
- ● Apply no image processing to outgoing image

LUT Operation
- ○ Unable to apply LUT correction.
- ○ Apply LUT correction process to the image.
- ○ Using VOI LUT module for sending image.
  - ☐ Unable to apply modality LUT.
- ● Using Modality LUT module for sending image.

FR5H0240.EPS

(4) Select ● Apply no image processing to outgoing image.

(5) Select then ● Using Modality LUT module for sending image.

(6) Save the setup data and then return to the "Main Menu" window.

(7) Quit FieldTool.

■ Copying the Modality.dat file

(1) Insert the AP-CD into the CD-ROM drive.

➔ The AP installer starts up.

(2) Shut down the installer and return to the desktop screen.

(3) Copy the Modality.dat file from the AP-CD onto the CRTLUT folder in the AP's program folder.

Copy source : "CD-ROM drive:\setting\modalitylut\Modality.dat"
Copy destination :"C:\Program Files\HI_CX\CRTLUT" folder

(4) Rename the copied Modality.dat file to "host name of the target device for image distribution.lut".

<Example>
If the host name of the target device for image distribution is "Viewer1", rename it to "Viewer1.lut".

➔ A message appears saying that the file extension and ReadOnly filename are changed.

(5) Click "Yes" to rename the filename.

(6) Remove the AP-CD and restart the system.

Appendix 9. Software Version A07 Functions

9.1 Installing New Software Version A07

Because the procedure used for newly installing the A07 version software is the same as that used for the previous A06 version, see the procedure directed for installation of the previous version.
Note that when the OS used is XP, displayed images will be slightly different (the procedure to be performed is the same).

☞ "Maintenance 13. Installing the QA-WS Application"

9.2 Upgrading the Software Version to A07

Because the procedure used for upgrading the A06 version software to A07 is the same as that used for the previous A06 version, see the procedure directed for the previous version.
Note that when the OS used is XP, displayed images will be slightly different (the procedure to be performed is the same).

☞ "Maintenance – Appendix 8.1 Software Version Upgrade to A06"

9.3 Setting Whether or Not to Change the Shutter Processing Image SOP-Instance UID

Software version A07 makes it possible not to change SOP-Instance UID of an image after it has been subjected to shutter processing.

▼ *SUPPLEMENT* ▲

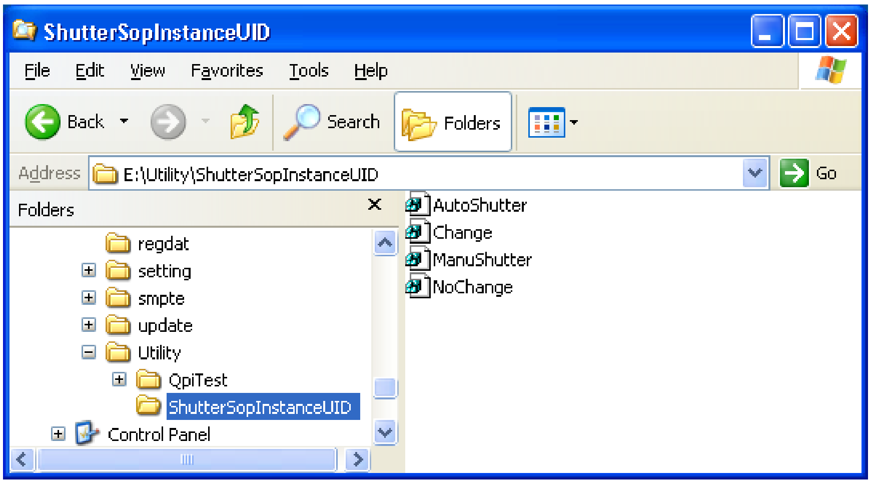
SOP-Instance UID of an image was always changed after it has been subjected to shutter processing. This causes a problem of storing on competing equipment a multiple number of images that are basically unnecessary for it, when transferring an image subjected to shutter processing to competing equipment via DICOM. Such problem can be avoided if SOP-Instance UID of an image is not changed after it has been subjected to shutter processing.

The default setting after installation remains the same (SOP-Instance UID is always changed after an image has been subjected to shutter processing).
To change the default setting, double-click a registry file included in the AP-CD to set up the registry. For images subjected to automatic shutter processing and images subjected to manual shutter processing using the image editing dialog, it is possible to set whether or not to change SOP-Instance UID of an image.

Described below is the procedure to be performed.

(1) Insert the AP-CD into the CD-ROM drive.
Click [Cancel] when the "Setup" window opens.
➔ The desktop screen opens.

(2) Open the folder below.
CD-ROM:\Utilty\ShutterSopInstanceUID\


ShutterSopInstanceUID
File
Edit
View
Favorites
Tools
Help
Back
Search
Folders
Go
Folders
regdat
setting
smpte
update
Utility
QpiTest
ShutterSopInstanceUID
Control Panel

Address E:\Utility\ShutterSopInstanceUID

AutoShutter
Change
ManuShutter
NoChange

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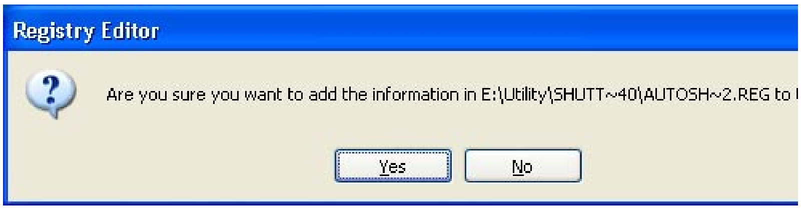
(3) Double-click a registry file according to whether or not to change SOP-Instance UID of an image after it has been subjected to shutter processing.

Registry file	Meaning	Description
change.reg	Always changed. (previously used spec.)	Always changes SOP-Instance UID of an image subjected to automatic shutter processing, as well as of an image subjected to manual shutter processing using the image editing dialog.
ManuShutter.reg	Changed after manual shutter processing.	Changes SOP-Instance UID of an image subjected to manual shutter processing using the image editing dialog, but does not change SOP-Instance UID of an image subjected to automatic shutter processing.
AutoShutter.reg	Changed after automatic shutter processing.	Changes SOP-Instance UID of an image subjected to automatic shutter processing, but does not change SOP-Instance UID of an image subjected to manual shutter processing using the image editing dialog.
NoChange.reg	Never changed.	Does not change SOP-Instance UID of both images subjected to automatic shutter processing and manual shutter processing using the image editing dialog.

➔ A window opens prompting you to confirm the registry setup.

(4) Click [Yes].



Are you sure you want to add the information in E:\Utility\SHUTT~40\AUTOSH~2.REG to t

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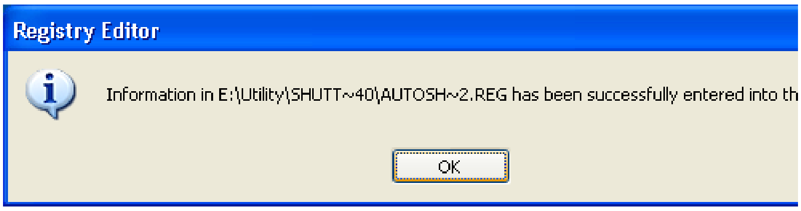
➔ A window opens to show that the registry setup has been completed successfully.

(5) Click [OK].



Information in E:\Utility\SHUTT~40\AUTOSH~2.REG has been successfully entered into th

FTHF1003.EPS

(6) Remove the AP-CD from the CD-ROM drive.

▼ *SUPPLEMENT* ▲

For a pre-normalized image, the image editing dialog can be used for clearing off shutter-processed areas. In this case, the operation for clearing off shutter-processed areas will also be considered to make part of shutter processing, and whether or not to change SOP-Instance UID is determined based on the registry setup described above.

Appendix 10. Creating/Deleting Film Markers

By default, the QA-WS allows you to use 119 different film markers that are frequently used at institutions. However, some institutions might want to use some other film markers or delete infrequently used film markers from the list.

This appendix explains about the procedures for creating new film markers and deleting unnecessary film markers.

10.1 Creating Film Markers

New film markers can be created with “Paint”, which is a standard application supplied with the OS. When creating a film marker, launch Paint and perform the following procedure.

● Image format

Only the monochrome format of Windows BMP can be used.

● Filename

The filename must consist of an alphanumeric character string and extension (.bmp).
When the AP lists film markers, they are arranged in the order determined by their file names.

● Film marker data storage location

The BMP file of a created film mark can be available if it is stored in either of the following two folders.

C:\Program Files\Hi-cx\Bmp\List
C:\Program Files\Hi-cx\Bmp\Img

The BMP file of the film mark stored in the List folder appears in the film mark list at the lower right corner of the window when the user opens the AP image editing window.

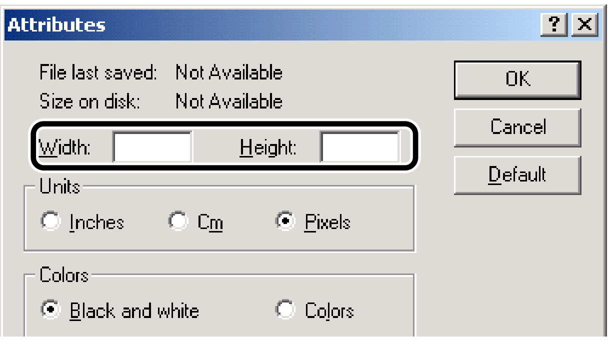
The BMP file of the film mark stored in the Image folder appears on a CR image when the user paste it on the image.

● File size

The file size of the List folder is fixed at 144 pixels (width) × 48 pixels (height). You are not allowed to change the predetermined size.

The file size of the Img folder is not predetermined. You can create it in any size. However, if the file size used is excessively large, the film mark created will appear visually annoying on a CR image, and will not be visible sufficiently if the size used is too small.
We, therefore, recommend that you create the file size referring to the previously used film mark size. For example, the “L” size is equivalent to 21 pixels (width) × 36 pixels (height).

From Paint’s “Image” menu, choose “Attributes”. In the “Attributes” window, specify the size by entering values in the “Width” and “Height” input fields.



File last saved: Not Available
Size on disk: Not Available
Width: Height:
Units: ○ Inches ○ Cm ● Pixels
Colors: ● Black and white ○ Colors

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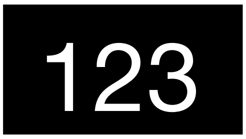
● Film marker retention after an application upgrade

Even if you upgrade the application, created film markers are retained.

10.2 Film Marker Creation Example [Reference]

The procedure for creating a film marker is described below.
The procedure presumes that the following marker is to be created by copying a previously used film mark.

Filename : 123.bmp



● Creating a film mark in the List folder

(1) Copy C:\Program Files\Hi-cx\Bmp\List\1.bmp to change the filename to 123.bmp.

◆ *NOTE* ◆

Exercise care not to use the same filename as that already exists.

---

(2) Click **Start**, point to “Programs” and “Accessories”, and then click “Paint”.
➔ Paint then opens.

(3) Use Paint to open 123.bmp.

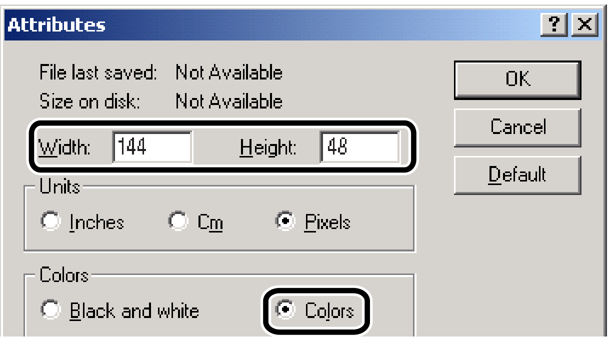
(4) From the “Image” menu, choose “Attributes”.
➔ The “Attributes” window then opens.

(5) Enter the following setup data in the “Width”, “Height”, “Units” and “Colors” fields, respectively, and then click OK.

Setup data : Width = 144, Height = 48, Units = Pixels, Colors = Colors

◆ *NOTE* ◆

Never change the data set up as above.



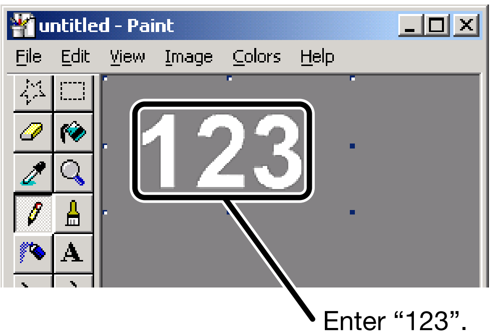
File last saved: Not Available
Size on disk: Not Available
Width: 144 Height: 48
Units
○ Inches ○ Cm ● Pixels
Colors
○ Black and white ● Colors

FR000003.EPS

(6) Enter “123”.

◆ NOTE ◆

Use the same text and background colors as those used for the source image for copying.


untitled - Paint
File Edit View Image Colors Help
123
Enter “123”.

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(7) Save the created 123.bmp data in the predetermined folder (C:\Program Files\Hi-cx\Bmp\List).

● Creating a film mark in the Img folder

(1) Copy C:\Program Files\Hi-cx\Bmp\Img\1.bmp to change the filename to 123.bmp.

◆ *NOTE* ◆

Exercise care not to use the same filename as that already exists.

---

(2) Click Start, point to “Programs” and “Accessories”, and then click “Paint”.

➔ Paint then opens.

(3) Use Paint to open 123.bmp.

(4) From the “Image” menu, choose “Attributes”.

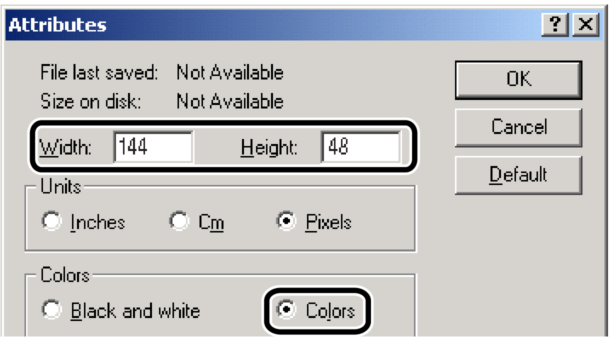
➔ The “Attributes” window then opens.

(5) Perform setups for “Width”, “Height”, “Units” and “Colors” in the respective fields accordingly, and change data for “Width” and “Height” as required. Click then OK.

Setup data : Width = any value, Height = any value, Units = Pixels, Colors = Colors

◆ *NOTES* ◆

- *To change setup values for “Width” and “Height”, select any appropriate values referring to the previously used film mark.*
- *For “Units” and “Colors”, never change the data set up as above.*



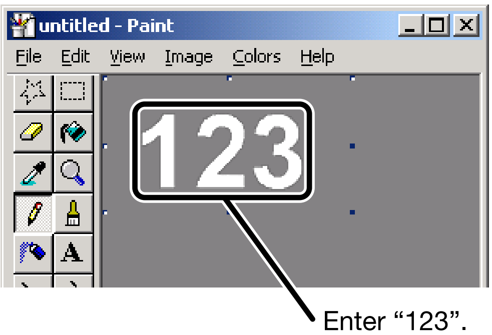
File last saved: Not Available
Size on disk: Not Available
Width: 144 Height: 48
Units
○ Inches ○ Cm ● Pixels
Colors
○ Black and white ● Colors

FR000003.EPS

(6) Enter “123”.

◆ ***NOTE*** ◆

Use the same text and background colors as those used for the source image for copying.



Enter “123”.

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(7) Save the created 123.bmp data in the predetermined folder (C:\Program Files\Hi-cx\Bmp\Img).

10.3 Checking Film Markers

(1) Launch the AP to display the image editing window

(2) Click the [Change Image Processing Attributes] tab on the image editing window. Check to see that “123” is displayed on the film mark list.

(3) Click “123” on the film mark list. Click then the mouse on an point on the CR image to make sure that “123” is displayed on the same CR image.

10.4 Deleting Film Markers

Move the associated film mark BMP file in the following folder to Recycle Bin or another folder.
C:\Program Files\Hi-cx\Bmp\List
C:\Program Files\Hi-cx\Bmp\Img

◆ ***NOTE*** ◆

Be sure to move as a pair BMP files of the same filename in the above two folders. If only one of those BMP files is moved, the intended film mark will not be displayed correctly on the AP.

Appendix A Setups Required for Connecting the SL-IC300 Monitor

☞ For the SL-IC300 connection procedure, see the "Super Resolution LCD Monitor SL-IC300 Service Manual".

To connect the Super Resolution LCD Monitor SL-IC300 to the QA-WS, be sure to perform initial setups shown below.

- Setting the monitor pixel size (FieldTool)
- Changing the display gradation correction table
- Magnifying the list system dialog character size (registry)
- Changing the image edit dialog.
- Re-builtding the database.

● Have the following ready for use.
HI-C655 A09 version software installation CD-ROM or
HI-C655 B01 version software installation CD-ROM
(Both are abbreviated to "AP-CD".)

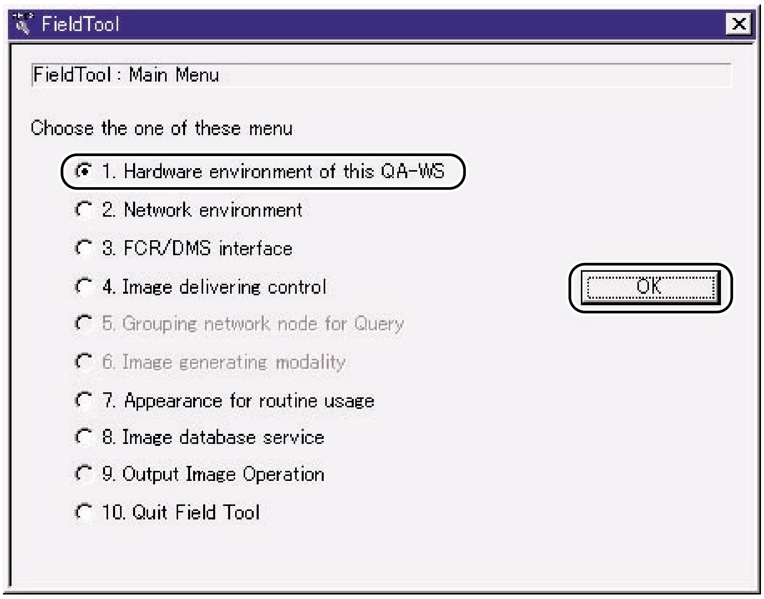
Described herein are the setup procedures.

■ Setting the pixel size (FieldTool)

Set the monitor pixel size, in accordance with the SL-IC300. The SL-IC300 pixel size is "0.207".

(1) Launch the [FieldTool].

(2) Check to see that ◉ 1. Hardware environment of this QA-WS has been selected and click OK.


FieldTool
FieldTool : Main Menu
Choose the one of these menu
◉ 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
○ 8. Image database service
○ 9. Output Image Operation
○ 10. Quit Field Tool
OK

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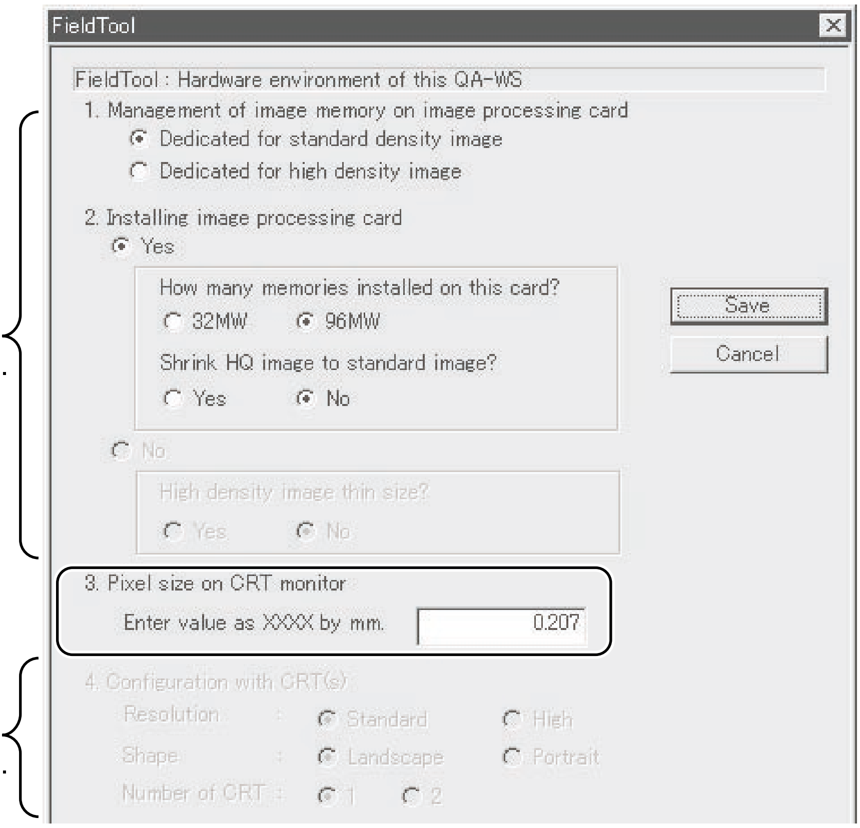
(3) Check the setting for "3. Pixel size on CRT monitor". If not set correctly, make a correct setting.

"Pixel size on CRT monitor" : 0.207



FieldTool

FieldTool : Hardware environment of this QA-WS

1. Management of image memory on image processing card
   - ● Dedicated for standard density image
   - ○ Dedicated for high density image

2. Installing image processing card
   - ● Yes
     - How many memories installed on this card? ○ 32MW ● 96MW
     - Shrink HQ image to standard image? ○ Yes ● No
   - ○ No
     - High density image thin size? ○ Yes ● No

3. Pixel size on CRT monitor
   - Enter value as XXXX by mm. 0.207

4. Configuration with CRT(s)
   - Resolution : ● Standard ○ High
   - Shape : ● Landscape ○ Portrait
   - Number of CRT : ● 1 ○ 2

These esttings may differ depending on the equipment status.

These esttings may differ depending on the equipment status.

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(4) Click Save.

➔ You are returned to the "FieldTool" window.

(5) Select ○ 10. Quit Field Tool on the "FieldTool" window and click OK.

➔ The [FieldTool] will then quit.

■ Changing the display gradation correction table

Copy the SL-IC300 display gradation correction table from the AP-CD to the HI-C655 program folder.

(1) Insert the AP-CD into the CD-ROM drive.

➔ The AP installer will start.

(2) Click "Cancel" to quit the installer.

(3) Open the folder shown below from the AP-CD.

"CD-ROM drive: \Setting\crtlut\Presto"

(4) Copy the "crtlut1.dat" and "crtlut2.dat" files included in the "Presto" folder onto the "C:\Program Files\HI_CX" folder.

➔ A message appears asking you if you wish to overwrite existing file.

(5) Click "Yes".

■ Magnifying the list system dialog character size (registry)

Because the window resolution is high on the SL-IC300, the list system dialog characters that display patient/ exposure information tends to look rather smaller. For this reason, the list system dialog character size needs to be magnified accordingly.

To magnify the character size, double-click the registry file included in the AP-CD.

(1) Open the following folder included in the AP-CD.
"CD-ROM drive: \Setting\Presto\english"

(2) Double-click the following registry file included in the folder opened in step (1) above.
"PrestoFontSize_E.reg"
➔ A message appears indicating that the registry has been set up.

(3) Click [OK].

■ Changing the image edit dialog

In keeping with the increased display resolution on the SL-IC300, the image display area in the image edit dialog has been enlarged. This requires the program file (CmdImgEdit.dll) that displays the image edit dialog to be changed accordingly.
Copy from the AP-CD the CmdImgEdit.dll file for the SL-IC300 onto the HI-C65 program folder.

(1) Insert the AP-CD into the CD-ROM drive.
➔ The AP installer starts up.

(2) Click "Cancel" to shut down the installer.

(3) Open the following AP-CD folder.
"CD-ROM drive: \setting\Presto\english"

◆ *NOTE* ◆

Depending on the NT Explorer settings, the "CmdImgEdit.dll" file may not be displayed in the "japanese" or "english" folder. In such a case, take following actions.

(1) Select "Options" from the NT Explorer's "Display" menu.

(2) Select "Display All Files" on the "Display" tab sheet and click "OK".

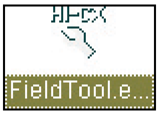
(4) Copy the "CmdImgEdit.dll" file located in the "japanese" or "english" folder onto the "C:\Program Files\HI_CX" folder.
➔ A message appears asking if you wish to overwrite the existing file.

(5) Click "Yes".

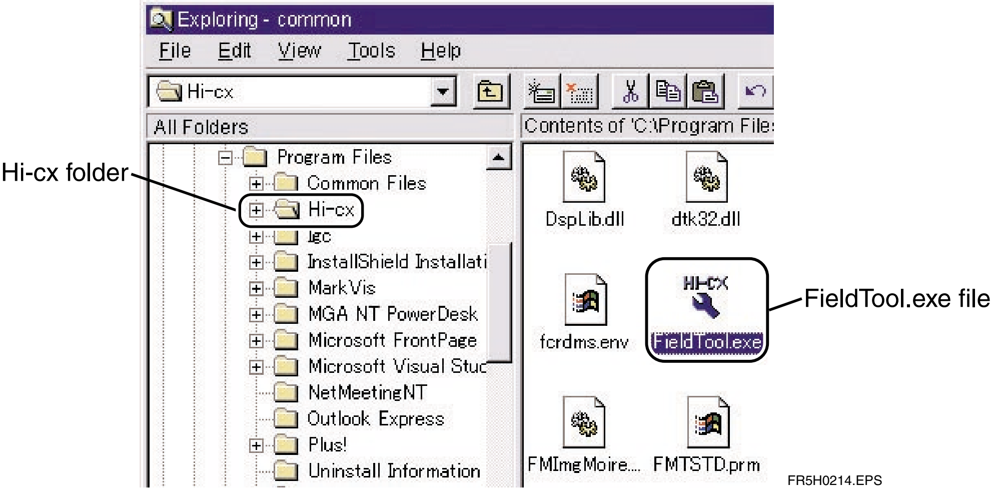
■ Re-building the database

When the AP has been upgraded, the relevant database must be re-built.

(1) Open the "C:\Program Files\Hi-cx" folder.

(2) Double-click .

HI-CX
FieldTool.e...



Exploring - common
File
Edit
View
Tools
Help
Hi-cx
All Folders
Contents of 'C:\Program File
Program Files
Common Files
Hi-cx
lgc
InstallShield Installati
MarkVis
MGA NT PowerDesk
Microsoft FrontPage
Microsoft Visual Stuc
NetMeetingNT
Outlook Express
Plus!
Uninstall Information
DspLib.dll
dtk32.dll
fcrdms.env
HI-CX
FieldTool.exe
FMImgMoire...
FMTSTD.prm
Hi-cx folder
FieldTool.exe file

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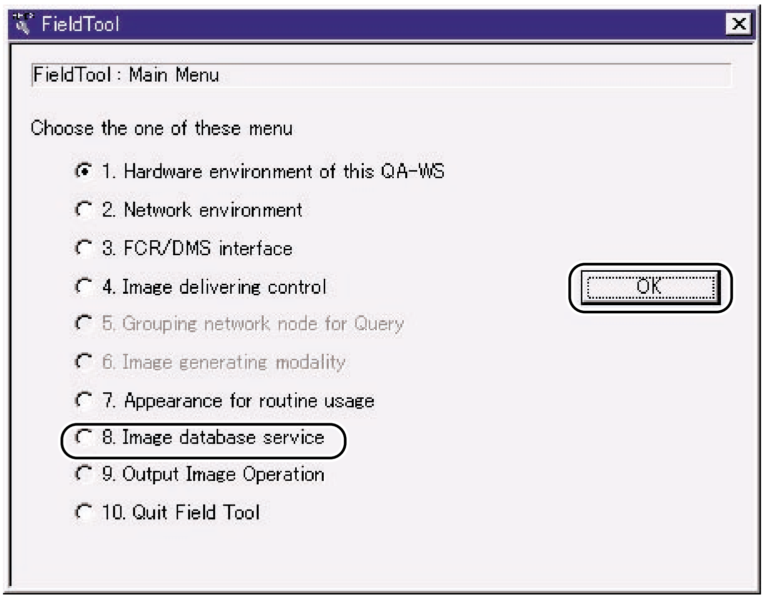
(3) Select ○ 8. Image database service and click OK.



FieldTool

FieldTool : Main Menu

Choose the one of these menu

- ● 1. Hardware environment of this QA-WS
- ○ 2. Network environment
- ○ 3. FCR/DMS interface
- ○ 4. Image delivering control
- ○ 5. Grouping network node for Query
- ○ 6. Image generating modality
- ○ 7. Appearance for routine usage
- ○ 8. Image database service
- ○ 9. Output Image Operation
- ○ 10. Quit Field Tool

OK

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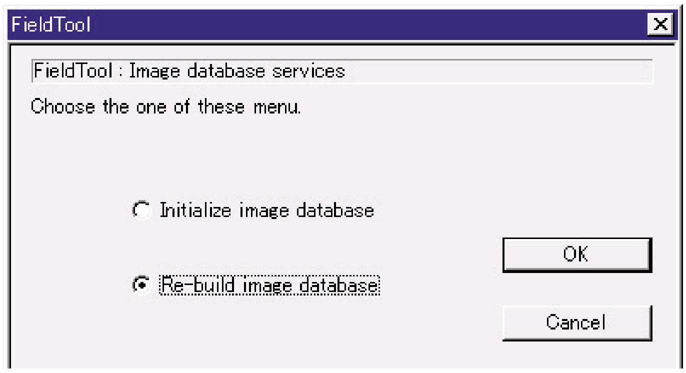
(4) ● Re-build image database and click OK.


FieldTool
○ Initialize image database
● Re-build image database
OK
Cancel

FieldTool : Image database services

Choose the one of these menu.

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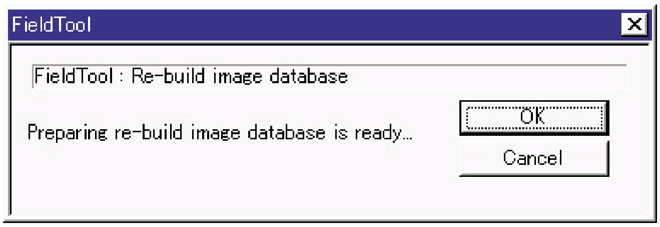
(5) Click OK.


FieldTool
OK
Cancel

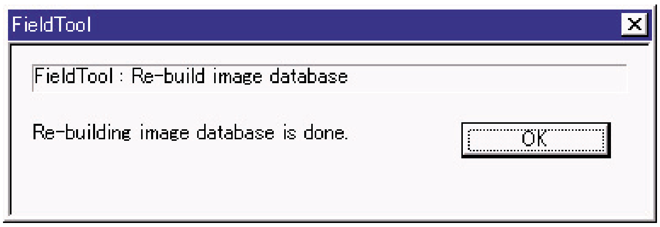
FieldTool : Re-build image database

Preparing re-build image database is ready...

FR5H0217.EPS

➔ Database re-building will be processed.

(6) Click OK.


FieldTool
OK

FieldTool : Re-build image database

Re-building image database is done.

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(7) Click Cancel several times.

➔ You are returned to the FieldTool main menu.

(8) Select ○ 10. Quit Field Tool and click OK.

➔ The FieldTool will then quit.

(9) Restart the system.

Error Codes

Message No.	Error Message	Conditions and Causes of Error	Remedies
0002	Error: Application software detected the error in the data compression.	An error occurred while compressing the image data. (1) The image file received is damaged. (2) The disk is damaged. (3) Data compression program error.	(1) Check the disk. (2) Contact service headquarters.
0003	Error: Application software detected the error in the data de-compression.	An error occurred while decompressing the image data. (1) The image file received is damaged. (2) The disk is damaged. (3) Data compression program error occurring in the transmission device. (4) Data decompression program error.	(1) Check the disk. (2) Contact service headquarters.
0004	Error: Application software detected the error in the data zooming process.	(1) The parameter value is invalid. (2) Program error.	Contact service headquarters.
0005	Error: Application software detected the error in the density modification process.	(1) The parameter value is invalid. (2) Program error.	Contact service headquarters.
0006	Error: Application software detected the error in the gamma modification process.	(1) The parameter value is invalid. (2) Program error.	Contact service headquarters.
0007	Error: Application software detected the error in the frequency modification process.	(1) The parameter value is invalid. (2) Program error.	Contact service headquarters.
0008	Error: Application software detected the error in the dynamic range control process.	(1) The parameter value is invalid. (2) Program error.	Contact service headquarters.
0009	Error: Application software detected the error in the USM control process.	(1) The parameter value is invalid. (2) Program error.	Contact service headquarters.
000A	Error: Application software detected the error in the flip and rotate process.	(1) The parameter value is invalid. (2) Program error.	Contact service headquarters.
000B	Error: Application software detected the error in the table creating process for frequency modification.	(1) The parameter value is invalid. (2) Program error.	Contact service headquarters.
000C	Error: Application software detected the error in the table creating process for gamma modification.	(1) The parameter value is invalid. (2) Program error.	Contact service headquarters.
000D	Error: Application software detected the error in the table creating process for dynamic range control.	(1) The parameter value is invalid. (2) Program error.	Contact service headquarters.
000E	Error was occurred in the process of image compression by JPEG.	An error occurred while compressing the image data. (1) The image file received is damaged. (2) The disk is damaged. (3) Data compression program error.	(1) Check the disk. (2) Contact service headquarters.
000F	Error was occurred in the process of image de-compression by JPEG.	An error occurred while decompressing the image data. (1) The image file received is damaged. (2) The disk is damaged. (3) Data compression program error occurring in the transmission device. (4) Data decompression program error.	(1) Check the disk. (2) Contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
0010	Error was occurred in the process of zooming/shulinking with overlay.	(1) The parameter value is invalid. (2) Program error.	Contact service headquarters.
0011	Error was occurred in the process of flip/rotation with overlay.	(1) The parameter value is invalid. (2) Program error.	Contact service headquarters.
0012	Error was occurred in the moire elimination process.	The input image data is invalid.	Check the input image data.
0013	Error was occurred in the normalization process.	The input image data is not the pre-normalization process image. The Sk or Gp value is invalid.	Check the input image data.
0014	Error was occurred in the merge process of bitmap image.	Unused.	
0015	Error was occurred in the EDR process.	The configuration management parameter file is invalid.	Check the configuration management parameter file.
0016	Error was occurred in the Multi-Frequency DR compression process.	The configuration management parameter file is invalid.	Correct the parameter file.
0017	Error was occurred in the Multi-Frequency Enhancement compression process.	The configuration management parameter file is invalid.	Correct the parameter file.
81F4	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
81F5	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
81F6	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
81F7	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
81F8	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
81F9	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
81FA	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
81FB	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
81FC	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
81FD	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
81FE	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
81FF	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
8200	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
8201	Error: Error in a command definition file. Line no.	The ToolBox.RSF file cannot be found.	Newly install the file.

Message No.	Error Message	Conditions and Causes of Error	Remedies
8202	Error: Error in a command definition file. Line no.	The ToolBox.RSF file is damaged.	Newly install the file.
8203	Error: Error in a command definition file. Line no.	The ToolBox.RSF file is damaged.	Newly install the file.
8204	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
8205	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
8206	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
8207	Error: Error in a command definition file. Line no.	The ToolBox.RSF file format is not correct.	Correct a format error on the line shown with the line no. Newly install the file if the position to be corrected cannot be found.
8208	Error: Cannot allocate memory.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters.
8209	Error: Error in initializing socket.	A network-related error occurred between the application software and the OS. Basically, this error does not occur during normal use.	(1) Initialize the OS environment by restarting the system. (2) If error recurs, abnormal OS, network card failure or defective application software can be assumed to be the causes. Contact service headquarters.
820A	Error: Cannot create magnifying glass.	A display-related error occurred between the application software and the OS. Basically, this error does not occur during normal use.	(1) Initialize the OS environment by restarting the system. (2) If error recurs, abnormal OS or defective application software can be assumed to be the causes. Contact service headquarters.
820B	Error: Installation is irrelevant.	The application software does not start up due to incorrect installation.	(1) Install the key file. (2) If not improved, contact service headquarters.
820C	The error is occurred in the process of the analysis of film strings configuration file.	The component for creating film annotation character bitmap sent back an error while initializing the film annotation character setup file.	Correct the wrong content of the FilmStrFmt.env file.
83E8	Error: Program error.	An application software program error. Basically, this error derives from application software failure. If it occurs when starting the system, settings for the image processing board or E-i/f board can be incorrect.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EiflmgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.

Message No.	Error Message	Conditions and Causes of Error	Remedies
85DC	Error: Cannot start ROT subsystem.	Failed in restarting the sub-system.	(1) If this failure occurs when restarting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EifImgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
85DD	Error: Timeout in initializing ROT subsystem.	Failed in starting the sub-system.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EifImgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
85DE	Error: Timeout in terminating ROT subsystem.	Failed in starting the sub-system.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EifImgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start""(only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
85DF	Error: Cannot start fieldtool.	The FieldTool (configuration application) cannot be started for any reasons. The following reasons can be assumed. (1) It has already been started. (2) Files required cannot be found. (3) Other	(1) Check to see that the FieldTool has not yet been started. (2) Newly install the FieldTool.
8708	Error: program error.	An application software program error. Basically, this error derives from application software failure. If it occurs when starting the system, settings for the image processing board or E-i/f board can be incorrect.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EifImgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start""(only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
89F4	Error: Application software detected the exemption of memory shortage.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
89F5	Error: Application software cannot find the 'dll file' in the command definition file.	Even though the file name of the DLL(dynamic link library) to be started has been specified in the ToolBox.RSF file the DLL file specified in the RSF file cannot be found. RSF file error can be assumed.	(1) Overwrite the DLL file for installation. (2) Newly install the DLL file if error occurs in (1) above.
89F6	Error: Application software cannot load the 'Bitmap' data.	Image data to be displayed cannot be loaded (program error).	(1) Restart the system to initialize the OS for retrial. (2) If error recurs in (1) above, contact service headquarters.
89F7	Error: Application software detected the exemption of 'Serialize error'.	An error occurred while inputting/outputting image data to/from a file. (1) Defective disk (2) Program error (3) OS problem	(1) Restart the system to initialize the OS for retrial. (2) Contact service headquarters if error recurs.
89F8	Error: Application software detected the exemption of 'Method call error'.	A program error (command mismatch).	Contact service headquarters.
89F9	Error: Application software detected the exemption of 'Method call error'.	A program error (command mismatch).	Contact service headquarters.
89FA	Error: Application software detected the error in the GUI interface process.	Application failure that relates to the user interface.	(1) Contact service headquarters.
89FB	Error: Program error.	An application software program error. Basically, this error derives from application software failure. If it occurs when starting the system, settings for the image processing board or E-i/f board can be incorrect.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EifImgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
9068	Error: Application software cannot initialize the Windows socket.	Error detected during the self-check (WinAP/unexpected error).	Restart This Equipment.
9069	Error: Application software cannot get the configuration information.	An error occurred when acquiring the configuration management setup information during equipment startup.	Make sure that all configuration management setup files are in positions specified. Check that those files have not been damaged or formatted correctly.
906A	Error: Socket library error.	(1) Windows network settings are not correct. (2) The network board driver does not function correctly. (3) Application program error.	(1) Using the ping command, make sure that connection to other devices is correct. If not, any of Windows network settings, network card driver settings and the hardware itself is faulty. (2) If the ping command functions normally, contact service headquarters.
906B	It was failed to convert DICOM data.	Program error.	Contact service headquarters.
906C	Error: Application software cannot create the thread required by network process.	Program error.	Contact service headquarters.
906E	Error: Socket library error.	(1) Windows network settings are not correct. (2) The network board driver does not function correctly. (3) Application program error.	(1) Using the ping command, make sure that connection to other devices is correct. If not, any of Windows network settings, network card driver settings and the hardware itself is faulty. (2) If the ping command functions normally, contact service headquarters.
906F	Error: Application software cannot manage the image information group class correctly.	Program error.	Contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9070	Error: Application software cannot finish the image information conversion correctly.	Failed in image data conversion for each protocol because data contained in the image information was invalid while outputting data to the outside or inputting it from the outside.	(1) Reinput/reoutput the image data. (2) Contact service headquarters.
9071	Error: Application software cannot start to search the image.	An error occurred when sending the image search start message.	(1) Search again from the outside. (2) Contact service headquarters.
9072	Error: Application software cannot transfer the information for searching correctly.	An error occurred during response to or request for searched data transmission, or request for termination of image search.	(1) Search again from the outside. (2) Contact service headquarters.
9073	Error: Application software cannot finish to search the image.	An error occurred when sending the response notifying the completion of image search.	(1) Search again from the outside. (2) Contact service headquarters.
9074	Error: Application software cannot get enough memory.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters. (4) Service headquarters will expand the memory capacity if it is not sufficient. If sufficient, service headquarters will request the design section for analysis.
9075	Error: Application software cannot search the database correctly.	Program error (an error occurred while searching local database).	(1) Search database again from the outside. (2) Contact service headquarters.
9076	Error: Application software cannot reserve the image for next operation.	Failed in sending the message requesting for image reservation to the remote device.	(1) Retransmit the image data. (2) Contact service headquarters.
9077	Error: Application software cannot manage the image information class correctly.	An error occurred while handling image information when inputting or reserving image data, canceling reserved external image data or registering a queue.	Contact service headquarters.
9078	Error: Application software cannot cancel the reservation of image.	An error occurred while canceling externally/internally reserved images via FINP/FNIP.	Contact service headquarters.
9079	Error: Application software cannot reserve the image for next operation through the network.	An error occurred during the FINP/FNIP external image reservation/acquisition process.	Contact service headquarters.
907B	Error: Application software cannot confirm the termination of image transfer.	An error occurred while confirming the external image transmission via the FINP/FNIP or during the initial process for reserving image output, or failed in receiving the response command for confirming image transmission.	(1) Retransmit the image data. (2) Check network settings. (3) Contact service headquarters.
907C	Error: Application software cannot store the image for transfer.	(1) An error occurred when storing the output image data in SPOOL-DB. (2) Failed in storing the input image in the temporary area.	(1) Retransmit the image data. (2) Check network settings. (3) Check disk capacity and status. (4) Contact service headquarters.
907D	Error: Application software cannot create the output queue.	An error occurred when registering the image data output queue.	(1) Retransmit the image data. (2) Check network settings. (3) Check hard disk capacity and status. (4) Contact service headquarters.
907E	Error: Application software cannot get the image information.	An error occurred when acquiring from the database the image information for data transmission.	(1) Retransmit the image information. (2) Check network settings. (3) Contact service headquarters.
907F	Error: Application software cannot get the image data for transfer.	An error occurred when acquiring from the database the image data for transmission.	(1) Retransmit the image data. (2) Check hard disk capacity and status. (3) Contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9080	Error: Application software cannot create the queue to transfer the image.	An error occurred while requesting or processing a response for reservation of image data transmission.	(1) Retransmit the image data. (2) Check network settings. (3) Contact service headquarters.
9081	Error: Application software cannot transfer the image.	An error occurred when requesting image transmission or processing the response for image data transmission.	(1) Retransmit the image data. (2) Check network settings. (3) Contact service headquarters.
9082	Error: Application software cannot send the information of image transfer termination correctly.	An error occurred while reporting the completion of the image transmission.	(1) Retransmit the image data. (2) Check network settings. (3) Contact service headquarters.
9083	Error: Image output process is busy.	During the image output process, the Other Host sent back the BUSY response even after retrial processing.	Check status of the Other Host and retry image data output.
9084	Error: Application software cannot create the temporal file.	Internal error (file cannot be created in the temporary working directory while inputting/outputting the image data).	(1) Retransmit the image data. (2) Check disk capacity and status. (3) Contact service headquarters.
9085	Error: Application software cannot store the image information.	Internal error (failed in storing image information in the database during the image input process).	(1) Retransmit the image data. (2) Check hard disk capacity and status. (3) Contact service headquarters.
9086	Error: Application software cannot store the image data.	Internal error (failed in storing image data in the database during the image data input process).	(1) Retransmit the image data. (2) Check disk capacity and status. (3) Contact service headquarters.
9087	Error: Application software cannot cancel the reservation of image.	Internal error (failed in responding to request for cancellation of externally reserved image data.)	Contact service headquarters.
9088	Error: Application software cannot receive the network command.	Failed in receiving messages via the network. Network not available or internal processing error.	(1) Retransmit the network command. (2) Check network settings and status. (3) Contact service headquarters.
9089	Error: Application software cannot create the file mapping object.	An internal error occurred (an error occurred when creating the file mapping object for creation of image data header during the image data input process).	Contact service headquarters.
908A	Error: Application software cannot map the file.	An error occurred during image data mapping process while storing or acquiring image data when an image was input/output.	Contact service headquarters.
908B	Error: Application software cannot write the image header information.	Internal error (an error occurred when creating a image data header while storing the image data during the image input process.)	(1) Retransmit the image data. (2) Check disk capacity and status. (3) Contact service headquarters.
908C	Error: Application software cannot receive the image data.	An internal error occurred (an error occurred while receiving the image data during image input).	(1) Retransmit the command. (2) Check memory capacity and virtual memory settings. (3) Contact service headquarters.
908D	Error: Application software cannot send the network command.	Failed in receiving a network message. The network is not available or an internal processing error can be assumed.	(1) Retransmit the command. (2) Check network settings and status. (3) Contact service headquarters.
908E	Error: Network command format is not correct.	An internal error occurred (an error occurred while creating or analyzing the network command).	(1) Retransmit the command. (2) Check network settings and status. (3) Contact service headquarters.
908F	Error: Application software cannot create the network command.	An internal error occurred (an error occurred while analyzing the network command).	(1) Retransmit the command. (2) Check network settings and status. (3) Contact service headquarters.
9090	Error: Application software detected the time out in image data receiving process.	Timeout detected while receiving the image data.	(1) Retransmit the command. (2) Check network settings and status. (3) Contact service headquarters.
9091	Error: Network command is not correct.	The network command (response) received and the command header are not correct.	(1) Retransmit the network command. (2) Check network settings and status. (3) Contact service headquarters.
9093	Error: Application software detected the time out in network command receiving process.	Timeout detected when receiving the network command.	(1) Check status of Other Hosts and that the network is correctly connected. (2) Restart This Equipment. (3) Contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9094	Error: Application software cannot check the input data properly.	An error occurred while checking to see whether it is an image received as a result of data search or a simply transmitted image. Command data of the network message is abnormal.	(1) Retransmit the image data. (2) Check network settings and status. (3) Contact service headquarters.
9095	Error: Application software cannot check the data properly.	An error occurred while handling the image information.	(1) Retransmit the image data. (2) Check network settings and status. (3) Contact service headquarters.
9096	Error: Application software cannot send the image data.	Status of response of image data transmission is not normal. An internal error occurred (an error occurred during the image data sending process).	(1) Retransmit the image data. (2) Check network settings and status. (3) Contact service headquarters.
9099	Error: Application software cannot finish the image reserve error process.	An error occurred when sending a response message while the error status being indicated for response to image data reservation.	(1) Retransmit the image data. (2) Check network settings and status. (3) Contact service headquarters.
90B9	Error: Application software detect that multiple image receiving process is interrupted.	Transmission of a multiple number of images has been suspended or an error occurred while a multiple number of images were being sent during network command analysis.	Retry image transmission, if necessary.
90BA	Error: Application software cannot create the image output queue.	An error occurred during initial processing for image output for each protocol.	(1) Retransmit the image data. (2) Check network settings. (3) Check disk capacity and status. (4) Contact service headquarters.
90BB	Error: Application software cannot confirm the image output.	An error occurred during the image data transmission.	(1) Retransmit the image data. (2) Check network settings and status. (3) Contact service headquarters.
90BC	Error: Application software cannot create the image data output parameter.	An internal error (an error occurred while creating parameters for image output registration).	Contact service headquarters.
90BE	Error: Application software cannot create the image transfer data store start message.	The inter-sub-system message (for starting storage of transmission image data) has sent back an error.	See other sub-system messages.
90BF	Error: Application software cannot create the image transfer data store finish message.	The inter-sub-system message (for completing storage of transmission image data) has sent back an error.	See other sub-system messages.
90C0	Error: Application software cannot create the 'get database access handle' message.	Error sent back according to the inter-sub-system message (for acquisition of the database access right).	See other sub-system messages.
90C1	Error: Application software cannot create the 'release database access handle' message.	The inter-sub-system message (for releasing the database access right) has sent back an error.	See other sub-system messages.
90C2	Error: Application software cannot create the 'get image information' message.	Error sent back according to the inter-sub-system message (for acquisition of the database access right).	See other sub-system messages.
90C3	Error: Application software cannot create the 'store image information' message.	The inter-sub-system message (for storing image information) has sent back an error.	See other sub-system messages.
90C4	Error: Application software cannot create the 'start to get transfer image data' message.	The inter-sub-system message (for starting acquisition of transmission image data) has sent back an error.	See other sub-system messages.
90C5	Error: Application software cannot create the 'finish to get transfer image data' message.	The inter-sub-system message (for completing acquisition of transmission image data) has sent back an error.	See other sub-system messages.
90C6	Error: Application software cannot create the 'get the image header information' message.	The inter-sub-system message (for acquiring the image data header) has sent back an error.	See other sub-system messages.
90C7	Error: Application software cannot create the 'delete the image' message.	The inter-sub-system message (for deleting image) has sent back an error.	See other sub-system messages.

Message No.	Error Message	Conditions and Causes of Error	Remedies
90C8	Error: Application software cannot get the image.	An error occurred during the image acquisition process.	(1) Retransmit the image data. (2) Check network settings and status. (3) Contact service headquarters.
90C9	Error: Image header information is not correct.	Image information of the input image data is partially incorrect.	(1) Retransmit the image data. (2) Check network settings and status, especially host names of both sides. (3) Contact service headquarters.
90CA	Error: Application software cannot search the image.	Failed in processing of search for connected devices. This failure includes exceptional processing occurring internally.	(1) Retransmit the image data. (2) Check network settings and status. (3) Contact service headquarters.
90CB	Error: Application software cannot search the image through network.	Failed in image data search from connected devices. This failure includes internally occurred exceptional errors.	(1) Retransmit the image data. (2) Check network settings and status. (3) Contact service headquarters.
90CC	Error: Application software cannot get the image.	Failed in acquisition of images from connected devices. This failure includes exceptional processing occurring internally.	(1) Retransmit the image data. (2) Check network settings. (3) Check disk capacity and status. (4) Contact service headquarters.
90CD	Error: Application software cannot get the image through network.	Failed in image data acquisition from connected devices. This failure includes internally occurred exceptional errors.	(1) Retransmit the image data. (2) Check network settings. (3) Check disk capacity and status. (4) Contact service headquarters.
90CE	Error: Application software cannot create the image output queue.	An error occurred during initial processing for image output for each protocol.	(1) Retransmit the image data. (2) Check network settings. (3) Check disk capacity and status. (4) Contact service headquarters.
90CF	Error: Application software cannot send the image.	An error occurred during the image output process.	(1) Retransmit the image data. (2) Check network settings. (3) Check disk capacity and status. (4) Contact service headquarters.
90D0	Error: Application software cannot get the image.	An error occurred during the image input process.	(1) Retransmit the image data. (2) Check network settings. (3) Check disk capacity and status. (4) Contact service headquarters.
90D1	Error: Application software cannot cancel the image reservation through network.	An error occurred while canceling the reserved external images.	(1) Retransmit the image data. (2) Check network settings and status. (3) Contact service headquarters.
90D2	Error: Application software cannot confirm the image transmission through network.	An error occurred while checking transmission of external images.	(1) Retransmit the image data. (2) Check network settings and status. (3) Contact service headquarters.
90D5	Error: Application software cannot create the image output parameter set.	Internal error (an error occurred while creating parameters for registration of output images).	Contact service headquarters.
90DA	Error: Application software detect the unexpected error in the external communication process.	Error detected during the self-check (WinAPI error/unexpected error).	Restart This Equipment. If error recurs, contact service headquarters.
90DC	This program is executable only as a part of HI-CX application software.	An attempt was made to start up the HI_CO.exe file individually. Basically this error does not occur.	The HI_CO.exe file can be started up only from the HI_CX.exe file. Never start it up individually.
90DD	Error: Application software detected the error in the double open check process.	An error occurred during the HI_CO.exe file double open check process. This error cannot occur during routine operation.	Restart This Equipment.
90DE	Error: The external communication process is already running.	An attempt was made to start one or more HI_CO.exe files. This error cannot occur during routine operation.	Do not allow the file to be opened double. Quit all the sub-systems using the task manager and try restart.
90DF	Error: The external communication process is already running.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	(1) Make sure that the E-i/f was not set up even though the E-i/f board has not been installed. (2) Make sure that the E-i/f board driver has been started up. (This is possible by checking the [Control Panel] and then [Devices].) (3) Contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
90E0	Error: Application software cannot create the event of the subsystem process start message.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
90E1	Error: Application software cannot create the event of control thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
90E2	Error: Application software cannot initialize the image input manage class.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
90E3	Error: Application software cannot get the number of FCR readers connected.	Error detected during the self-check (WinAPI error/unexpected error) or the subsystem startup processing.	Restart This Equipment. If error recurs, contact service headquarters.
90E4	Error: Application software cannot create the thread of network message control.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
90E5	Error: Application software cannot create the control thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
90E6	Error: Application software cannot search the file for image input interrupt management.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
90E7	Error: Application software cannot send the 'initialization complete' message.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
90E8	Error: Application software cannot get the 'initialization complete' message.	Failed in starting the sub-system.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EifImgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
90E9	Error: Application software cannot send the 'start' message to control thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while starting the sub-system.	Restart This Equipment. Contact service headquarters if error recurs.
90EA	Error: Application software cannot get the number of host process to cancel the image retrieve reservation.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while starting the sub-system.	Restart This Equipment. Contact service headquarters if error recurs.
90EB	Error: Application software cannot get it's own name.	Host name of This Equipment could not be obtained from the configuration management during the reserved image canceling process at system startup.	(1) Make sure that the network set on Windows NT is normal. (2) Make sure that the network set using the FieldTool is normal.
90ED	Error: Application software cannot get the host name to cancel the image retrieve reservation.	Application software could not acquire the host name to cancel the image retrieval reservation.	Using the FieldTool, check that Group File settings are correct.
90EE	Error: Application software cannot resume the image receive process.	At time of system startup, an error occurred when resuming input of images that could not be stored the last.	(1) Delete the temporary working file of the image that could not be input and restart the system (file contained in the D:\Temp directory). (2) Contact service headquaters.
90EF	Error: Application software cannot delete some work files used for image receive process.	At time of system startup, an error occurred when deleting the temporary working file created during the image input process the last time.	Manually delete the temporary working file of the image that could not be deleted and restart the system (file contained in the D:\Temp directory).
90F0	Error: Application software cannot get the temporal directory for image receive process.	Directory for creating temporary working file could not be acquired from the configuration management file.	Check the event log for correct startup of the configuration management sub-system. Make sure that the system has been installed correctly. Restart the system.

Message No.	Error Message	Conditions and Causes of Error	Remedies
90F1	Error: Application software cannot search the working file for image retrieve process.	At time of system startup, an error occurred while searching for the temporary working file created during the previous image input process.	Make sure that there are no incorrect temporary working files in the temporary directory (D:\Temp). Manually delete unnecessary files if there are. Restart the system.
90F2	Error: Application software cannot search the file for image input termination.	At time of system startup, an error occurred while checking the temporary working files created during the previous image input process.	It is possible that there are incorrect temporary working files (files included in the D:\Temp directory). Manually delete those files and then restart the system.
90F3	Error: Application software cannot get the concurrent number of processes for image output through network.	An error occurred while acquiring from the configuration management sub-system the concurrent number of processes for image output via networks.	(1) Check the event log to see if the configuration management sub-system has been started normally. (2) Check to see that network settings of This Equipment by the Field Tool are normal. (3) If condition does not improve, newly install the application software.
90F4	Error: Application software cannot delete the work file for image receive process.	At time of system startup, an error has occurred while deleting the temporary working files created during the previous image input process.	Manually delete temporary working files (files included in the D:\Temp directory) that could not be deleted and then restart the system.
90F5	Error: Application software cannot get the memory to analyze the command.	Error detected during the self-check (WinAPI error/unexpected error) or the subsystem startup processing.	Restart This Equipment. If error recurs, contact service headquarters.
90F6	Error: Command name is not correct.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while starting up the sub-system.	Restart This Equipment. Contact service headquarters if error recurs.
90F7	Error: The number of parameters in command is not correct.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while starting up the sub-system.	Restart This Equipment. Contact service headquarters if error recurs.
90F8	Error: Application software cannot create the event between the control.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system start process.	Restart This Equipment. Contact service headquarters if error recurs.
90F9	Error: Application software cannot create the event to start the control thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
90FA	Error: Application software cannot create the event to start the network message control.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
90FC	Error: Application software failed to wait the event to start the network message control.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
90FD	Error: Application software cannot send the message for the termination event.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system termination process.	Restart This Equipment. Contact service headquarters if error recurs.
90FE	Error: Application software cannot send the message for the termination preparation event.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system termination process.	Restart This Equipment. Contact service headquarters if error recurs.
90FF	Error: Application software cannot send the message to cancel the termination preparation event.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system termination process.	Restart This Equipment. Contact service headquarters if error recurs.
9100	Error: Application software failed to send the end event to the output log control process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system termination process.	Restart This Equipment. Contact service headquarters if error recurs.
9103	Error: Application software cannot get the thread terminate code.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system termination process.	Restart This Equipment. Contact service headquarters if error recurs.
9104	Error: Application software cannot create the output log control thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
9105	Error: Application software cannot create the internal communication control thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9106	Error: Application software cannot create the network communication control thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
9107	Error: Application software cannot create the FCR communication control thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
9108	Error: Application software cannot create the image output control thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
9109	Error: Application software cannot create the control thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
910A	Error: Application software failed to wait the control thread end.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system termination process.	Restart This Equipment. Contact service headquarters if error recurs.
910B	Error: Application software cannot create the event between subsystems.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system start process.	Restart This Equipment. Contact service headquarters if error recurs.
910C	Error: Application software cannot receive the 'start up message' from external communication subsystem.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the sub-system startup process.	Restart This Equipment. Contact service headquarters if error recurs.
910D	Application software quit the external subsystem due to the timeout to receive the 'startup message' from other subsystems.	Failed in starting the subsystem.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EiflmgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
910E	Error: Application software detect the timeout to wait the other subsystem initialization.	Failed in starting the subsystem.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EiflmgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
9110	Error: Application software failed to wait the event to initialize the control thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while starting the sub-system.	Restart This Equipment. Contact service headquarters if error recurs.
9111	Error: Application software received unexpected message from other subsystem.	An unknown message has been received from other sub-systems during the internal request waiting process.	Restart the system.
9112	Error: Application software failed to send the 'termination preparation message' of the external communication subsystem.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while terminating the sub-system.	Restart This Equipment. Contact service headquarters if error recurs.
9113	Error: Application software failed to send the 'termination preparation cancel message' of the external communication subsystem.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while terminating the sub-system.	Restart This Equipment. Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9114	Error: Application software received the 'termination request message' without 'termination preparation request message'.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while terminating the sub-system.	Restart This Equipment. Contact service headquarters if error recurs.
9115	Error: External communication subsystem failed internal communication of termination.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while terminating the sub-system.	Restart This Equipment. Contact service headquarters if error recurs.
9117	Error: Application software cannot create the memory mapped file.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters.
9118	Error: Application software cannot change the status of the channel due to inactive.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the internally requested process.	Restart This Equipment. Contact service headquarters if error recurs.
9119	Error: Application software cannot create the process by receiving the message.	Error detected during the self-check. WinAPI/exceptional error. Failed in creating a thread requesting for internal processing.	Restart This Equipment. Contact service headquarters if error recurs.
911A	Error: Application software cannot initialize the image output queue.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while starting the image output control sub-system.	Restart This Equipment. Contact service headquarters if error recurs.
911B	Error: Application software failed to wait the event of image output queue control.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when starting controlling the image data output process.	Restart This Equipment. Contact service headquarters if error recurs.
911D	Error: Application software cannot delete the image output queue.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while deleting the image output queue after the image output process.	Restart This Equipment. Contact service headquarters if error recurs.
911E	Error: Application software cannot modify the image output queue.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while modifying (re-outputting) the queue information.	Restart This Equipment. Contact service headquarters if error recurs.
911F	Error: Image processing subsystem send the unexpected termination code.	Error detected during the self-check. WinAPI/exceptional error. An invalid termination code was sent back during the image output process.	Restart This Equipment. Contact service headquarters if error recurs.
9120	Error: Application software cannot get image output termination code.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when acquiring the image data output termination code.	Restart This Equipment. Contact service headquarters if error recurs.
9121	Error: Application software cannot get enough memory to create the image output queue.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) Contact service headquarters if error recurs.
9122	Error: Application software failed to start the image output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when starting the image output process.	Restart This Equipment. Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9123	Error: Application software cannot get enough memory to initialize the image output queue information.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free (3) Contact service headquarters if error recurs.
9124	Error: Application software cannot open the image output queue file.	Error detected during the self-check. WinAPI/exceptional error. Failed in opening the queue file during the queue control initialization process.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9125	Error: Application software cannot duplicate the image queue file.	Error detected during the self-check. WinAPI/exceptional error. Failed in creating the backup queue file during the queue control initialization process.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9126	Error: Application software cannot store the all image output queue in the queue file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while outputting image data to the queue file during the queue control termination process.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9127	Error: Application software cannot store the all image output queue in the queue backup file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while outputting image data to the queue backup file during the queue control termination process.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9128	Error: Application software cannot get enough memory to create the image output queue.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters.
9129	Error: Application software cannot write the data in the image output queue file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while writing image data to the queue file during the additional queue information process.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
912A	Error: Application software cannot write the data in the image output queue backup file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while writing image data to the queue backup file during the additional queue information process.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
912B	Error: Application software found the error in the image output queue data.	Error detected the during self-check. WinAPI/exceptional error. An error occurred when checking image output queue priority during the additional queue information process.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
912C	Error: Application software cannot get enough memory to display the image output queue status.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) Contact service headquarters if error recurs.
912D	Error: Application software cannot get the correct position in the image output queue file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when seeking the file while outputting the queue information file during the deletion process.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
912E	Error: Application software cannot write the data in the image output queue file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while writing data onto the queue file.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
912F	Error: Application software cannot create the image output queue file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating a new queue file.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9130	Error: The content of image output queue file is not correct.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when opening the queue file.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9131	The content of image output queue file is not correct due to the unexpected termination of modification process.	Error detected during the self-check. WinAPI/exceptional error. Failed in recovery of the queue file during the queue control initialization process.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9132	Error: Application software cannot delete the queue in the image output queue file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while deleting the queue information from the queue file.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9133	Error: Application software cannot delete the queue in the image output queue backup file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while deleting the queue information from the queue backup file.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9134	Error: Application software cannot get enough memory to modify the status of image output queue.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) Contact service headquarters if error recurs.
9135	Error: Application software cannot get enough memory to modify the image output queue file.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) Contact service headquarters if error recurs.
9136	Error: Application software cannot read the image output queue file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while reading the queue file and the backup queue file.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9137	Error: Application software cannot get enough memory to resume the image output queue.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) Contact service headquarters if error recurs.
9138	Error: Image output queue is not correct.	Error detected during the self-check. WinAPI/exceptional error. Contents of the queue file read are invalid.	Manually delete the queue file and restart This Equipment. Contact service headquarters if error recurs.
9139	Error: Application software cannot find the image output queue required to modify.	Because the queue information specified is being updated, no modification is possible on the image output queue.	Contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
913A	Error: Application software cannot modify the image output queue because other process is using the same queue.	Because the queue information specified is being updated, no modification is possible.	Contact service headquarters.
913B	Error: Application software cannot initialize the received image temporal file manage class.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while initializing the received image temporary file management class.	Restart This Equipment. Contact service headquarters if error recurs.
913C	Error: Application software cannot close the file during the process to get the file ID for the received image temporal file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while closing the received image temporary file.	Restart This Equipment. Contact service headquarters if error recurs.
913D	Error: Application software cannot get the file during the process to get the file ID for the received image temporal file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while checking the received image temporary file.	Restart This Equipment. Contact service headquarters if error recurs.
913E	Error: Application software cannot get the file ID for the received image temporal file.	Temporary files cannot be created because no more IDs are available for creating them for received image.	Check to see that there are no unnecessary temporary working files in the temporary directory. If there are, manually delete them and restart the system. If there is no disk capacity available that makes storage of temporary file possible, secure disk capacity for system restart.
913F	Error: Application software cannot lock the received image temporal file.	An error detected during the self-check (WinAPI error/unexpected error) or an error occurred while managing the input image temporary file.	Restart This Equipment. If error recurs, contact service headquarters.
9140	Error: Application software cannot unlock the received image temporal file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while managing the received image temporary file.	Restart This Equipment. Contact service headquarters if error recurs.
9141	Error: Application software does not support this modality.	Image data of unknown image type (images other than original images in FINP/FNIP, thumbnail images and overlay images) was input.	Contact service headquarters.
9142	Error: Application software cannot open the received image temporal file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when opening the received image temporary file.	(1) Restart This Equipment. (2) Delete temporary working files (files contained in the D:\Temp directory) that causes to display errors and restart the system.
9143	Error: Application software cannot open the received image temporal file due to the failure of unlock the file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when closing the received image temporary file.	(1) Restart This Equipment. (2) Delete temporary working files (files contained in the D:\Temp directory) that causes to display errors and restart the system.
9144	Error: Application software cannot search the received image temporal file.	Error detected during the self-check. WinAPI/exceptional error. The target file cannot be found while deleting the received image temporary file.	(1) Restart This Equipment. (2) Delete temporary working files (files contained in the D:\Temp directory) that causes to display errors and restart the system.
9145	Error: Application software cannot delete the received image temporal file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while deleting the received image temporary file.	(1) Restart This Equipment. (2) Delete temporary working files (files contained in the D:\Temp directory) that causes to display errors and restart the system.
9146	Error: Application software cannot search the received image temporal file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when closing the received image temporary file.	Restart This Equipment. Contact service headquarters if error recurs.
9147	Error: Application software cannot create the received image complete file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when creating received image complete file (*.cmp).	Restart This Equipment. Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9148	Error: Application software cannot get enough memory.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) Contact service headquarters if error recurs.
9149	Error: Application software cannot release the memory.	Error detected during the self-check. WinAPI/exceptional error. An unexceptional error occurred while making the memory free.	Restart This Equipment. Contact service headquarters if error recurs.
914A	Error: Application software cannot send 'image information modification' message.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when updating the image information while creating it for queue registration.	Restart This Equipment. Contact service headquarters if error recurs.
914B	Error: Application software detected the time-out in the image receiving process.	Timeout has been detected when transmitting next image data during input of a multiple number of images.	Check status of the device that transmits image data and then try retransmission.
914C	Error: Application software cannot lock the image information.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while exerting exclusive image deletion prohibition control over output image.	Restart This Equipment. Contact service headquarters if error recurs.
914D	Error: Application software cannot get the image size code.	Error detected during the self-check. WinAPI/exceptional error. Failed in reducing the number of pixels or the pixel/line value cannot be obtained from the size code.	Check that the correct size code has been specified for the sent image (or the image that is to be sent).
914E	Error: Application software detected the error during image data transfer.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while sending a response to image data transmission.	Restart This Equipment. Contact service headquarters if error recurs.
914F	Error: Application software might fail to lock the received image temporal file.	Error detected during the self-check (WinAPI error/unexpected error).	Restart This Equipment. If error recurs, contact service headquarters.
9150	Error: Application software tried to unlock the received image temporal file that other process locked.	Error detected during the self-check (WinAPI error/unexpected error).	Restart This Equipment. If error recurs, contact service headquarters.
9151	Error: Application software cannot rename the log file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when renaming the log file to the backup file.	Restart This Equipment. Contact service headquarters if error recurs.
9152	Error: Application software cannot open the log file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when opening the log file.	Restart This Equipment. Contact service headquarters if error recurs.
9153	Error: Application software cannot write the data in the log file.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when outputting image data to the log file.	Restart This Equipment. Contact service headquarters if error recurs.
9154	Error: Application software cannot get enough memory to control the image output process.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters.
9155	Error: Application software cannot get the permission to the spooled image database.	An error detected during the self-check (WinAPI error/unexpected error) or an error occurred in the database access right acquisition message.	Restart This Equipment. If error recurs, contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9156	Error: Application software cannot delete the entry in the spooled image database.	Error detected during the self-check. WinAPI/exceptional error. An error occurred in the image deletion message.	Restart This Equipment. Contact service headquarters if error recurs.
9157	Error: Application software cannot release the permission to the spooled image database.	An error detected during the self-check (WinAPI error/unexpected error) or an error occurred in the database access right release message.	Restart This Equipment. If error recurs, contact service headquarters.
9158	Error: Image output queue parameter is not correct to create new queue.	An error detected during the self-check (WinAPI error/unexpected error) or an error occurred while adding a piece of queue information.	Restart This Equipment. If error recurs, contact service headquarters.
9159	Error: Image output queue parameter is not correct.	An error detected during the self-check (WinAPI error/unexpected error) or an error occurred while deleting/adding a piece of queue information.	Restart This Equipment. If error recurs, contact service headquarters.
915A	Error: Image server name is invalid.	An error detected during the self-check (WinAPI error/unexpected error) or an error occurred when acquiring the image server name to create reserved image group information.	Restart This Equipment. If error recurs, contact service headquarters.
915B	Error: Application software cannot set the channel status data in the windows registry.	An error detected during the self-check (WinAPI error/unexpected error) or failed in setting in the registry.	Restart This Equipment. If error recurs, contact service headquarters.
915C	Error: Application software cannot get the channel status data from the windows registry.	An error detected during the self-check (WinAPI error/unexpected error) or failed in viewing the registry.	Restart This Equipment. If error recurs, contact service headquarters.
915D	Error: Channel ID is invalid.	An error detected during the self-check (WinAPI error/unexpected error) or an attempt was made to view an unknown channel ID.	Restart This Equipment. If error recurs, contact service headquarters.
915E	Error: Channel status is invalid.	An error detected during the self-check (WinAPI error/unexpected error) or an attempt was made to specify an unknown channel status.	Restart This Equipment. If error recurs, contact service headquarters.
915F	Error: Application software cannot send the 'control thread initialization termination' message.	An error detected during the self-check (WinAPI error/unexpected error) or an error occurred during initialization process at time of system startup.	Restart This Equipment. If error recurs, contact service headquarters.
9160	Error: Application software failed to prepare to delete the entry in the spooled image database.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when deleting the image data from the SPOOL-DB during the queue information deletion process.	Restart This Equipment. Contact service headquarters if error recurs.
9161	Error: Application software cannot get enough memory to prepare to delete the entry in the spooled image database.	An error detected during the self-check (WinAPI error/unexpected error) or an unexpected memory shortage error occurred when deleting images from the spooled image database for the purpose of deletion of queue information.	Restart This Equipment. If error recurs, contact service headquarters.
9162	Error: Application software cannot create the thread to cancel and to initialize the image retrieve reservation.	An error detected during the self-check (WinAPI error/unexpected error).	Restart This Equipment. If error recurs, contact service headquarters.
9163	Error: Application software cannot get the directory to store the image output queue file.	Failed in acquiring from the configuration management sub-system the directory for creating the queue file.	(1) Check the event log for correct startup of the configuration management sub-system. (2) If error recurs, newly install the application software.
9164	Error: Image receiving process is busy.	BUSY response was sent back by the Other Host as a result of command for responding to image data reservation.	Wait until retrial is attempted by the Other Host.
9165	Error: Application software force to terminate the external communication subsystem.	An error that disables the sub-system to be terminated according to normal procedures occurred.	Restart This Equipment.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9166	Error: Application software failed to close the EIF-IMG interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the FCR device termination process.	Restart This Equipment. Contact service headquarters if error recurs.
9167	Error: Application software failed to create the EIF-IMG interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the FCR device initialization process.	(1) Make sure that the FieldTool FCR/DMS i/f was not set up even though the E-i/f board has not been installed. (2) Make sure that the EIFIMG and SMCU devices have been started up. (This is possible by checking the [Control Panel] and then [Devices].) (3) Newly install the software application.
9168	Error: Application software detected the exception in the EIF-IMG interface process due to the memory shortage.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters.
9169	Error: Application software failed to read the EIF-IMG interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the closing process at time of terminating the FCR device.	Restart This Equipment. Contact service headquarters if error recurs.
916A	Error: Application software failed to reset the EIF-IMG interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the FCR device resetting process.	Restart This Equipment. Contact service headquarters if error recurs.
916B	Error: Application software failed to setup the EIF-IMG interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the FCR device resetting process.	Restart This Equipment. Contact service headquarters if error recurs.
916C	Error: Application software failed to detect the remote control signal in the EIF-IMG interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while monitoring remote control signals from the FCR devices.	Restart This Equipment. Contact service headquarters if error recurs.
916D	Error: Application software failed to prepare to detect the remote control signal in the EIF-IMG interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while monitoring preparations for receiving control signals from the FCR devices.	Restart This Equipment. Contact service headquarters if error recurs.
916E	Error: Application software failed to write the EIF-IMG interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while sending image data to the FCR devices.	Restart This Equipment. Contact service headquarters if error recurs.
916F	Error: Application software failed to write the EIF-IMG interface due to the invalid data size.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while sending image data to the FCR devices (invalid data size).	Restart This Equipment. Contact service headquarters if error recurs.
9170	Error. Application software detected the exception in FCR event management process due to the memory shortage.	An error detected during the self-check (WinAPI error/unexpected error) or an unexpected memory shortage error occurred while managing FCR events.	Restart This Equipment. If error recurs, contact service headquarters.
9171	Error: Application software failed to set the event in FCR management process.	An error detected during the self-check (WinAPI error/unexpected error) or an error occurred while managing FCR events.	Restart This Equipment. If error recurs, contact service headquarters.
9172	Error: Application software failed to reset the event in FCR management process.	An error detected during the self-check (WinAPI error/unexpected error) or an error occurred while managing FCR events.	Restart This Equipment. If error recurs, contact service headquarters.
9179	Error: Application software detected the exception in FCR pipe due to the memory shortage.	An error detected during the self-check (WinAPI error/unexpected error).	Restart This Equipment. If error recurs, contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
917A	Error: Application software cannot read the FCR pipe file.	An error detected during the self-check (WinAPI error/unexpected error).	Restart This Equipment. If error recurs, contact service headquarters.
917E	Error: Application software cannot create the EIF-IMG to monitor the image communication channel.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
917F	Error: Application software failed to detect to monitor the EIF-IMG image communication channel.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
9180	Error: Application software failed to send the event to monitor the EIF-IMG image communication channel.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
9181	Error: Application software detected unexpected error during the monitoring of the EIF-IMG image communication channel.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
9182	Error: Application software detected unexpected error during the monitoring of the serial communication channel (EOT).	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the serial communication channel interruption process.	Restart This Equipment. Contact service headquarters if error recurs.
9183	Error: Application software failed to monitor the serial communication channel (EOT).	An error has been detected during the self-check. WinAPI/exceptional error. An error has occurred while monitoring serial communication channel interruption.	Restart This Equipment. Contact service headquarters if error recurs.
9185	Error: Application software detected unexpected error during the monitoring of the serial communication channel(Break).	Error detected during the self-check. WinAPI/exceptional error. An error occurred while monitoring serial communication channel break.	Restart This Equipment. Contact service headquarters if error recurs.
9186	Error: Application software failed to monitor the serial communication channel (break release).	Error detected during the self-check. WinAPI/exceptional error. An error occurred while monitoring serial communication channel break.	Restart This Equipment. If error recurs, contact service headquarters.
9187	Error: Application software failed to send the event of monitoring the serial communication channel (break release).	Error detected during the self-check. WinAPI/exceptional error. An error occurred while sending the event of monitoring the release of serial communication channel break.	Restart This Equipment. Contact service headquarters if error recurs.
9188	Error: Application software failed to monitor the serial communication channel (break).	Error detected during the self-check. WinAPI/exceptional error. An error occurred while sending the event of monitoring serial communication channel break.	Restart This Equipment. Contact service headquarters if error recurs.
9189	Error: Application software failed to send the event of monitoring the serial communication channel (break).	Error detected during the self-check. WinAPI/exceptional error. An error occurred during event notification of serial communication channel break.	Restart This Equipment. Contact service headquarters if error recurs.
918A	Error: Application software detected unexpected error during the monitoring of the serial communication channel (timer C).	Error detected during the self-check. WinAPI/exceptional error. An error occurred while monitoring serial communication channel timer C timeout.	Restart This Equipment. Contact service headquarters if error recurs.
918B	Error: Application software failed to monitor the serial communication channel (timer C time-out).	Error detected during the self-check. WinAPI/exceptional error. An error occurred while monitoring serial communication channel timer C timeout.	Restart This Equipment. Contact service headquarters if error recurs.
918C	Error: Application software failed to send the event of monitoring the serial communication channel (timer C).	Error detected during the self-check. WinAPI/exceptional error. An error occurred while sending the event of monitoring serial communication channel timer C.	Restart This Equipment. Contact service headquarters if error recurs.
918D	Error: Application software cannot read EIF-IMG image receiving process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while reading the image data during the FCR image receiving process.	Restart This Equipment. Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
918E	Error: Application software cannot setup EIF-IMG image receiving process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when setting up the EIFIMG file during the FCR image reception process.	Restart This Equipment. Contact service headquarters if error recurs.
918F	Error: Application software cannot flash the view file of EIF-IMG image receiving process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while flashing the image data during the FCR image data receiving process.	Restart This Equipment. Contact service headquarters if error recurs.
9190	Error: Application software cannot create the image data view in the image data receiving process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating the image data view during the FCR image data receiving process.	Restart This Equipment. Contact service headquarters if error recurs.
9191	Error: Application software cannot send the event in the image data receiving process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when issuing notification of termination of image data reception during the FCR image reception process.	Restart This Equipment. Contact service headquarters if error recurs.
9193	Error: Application software cannot set the file EOF in the image data receiving process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while setting the data file EOF during the FCR image data receiving process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
9194	Error: Application software cannot set the file pointer in the image data receiving process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while setting the file pointer during the FCR image data receiving process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
9195	Error: Application software detected unexpected error in the image data receiving process.	Error detected during the self-Check. WinAPI/exceptional error. An unexpected error occurred.	(1) Check status of devices connected via the E-i/f. (2) Retransmit the image data. (3) Contact service headquarters.
9196	Error: Application software cannot release the view in the image data receiving process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while releasing the view when terminating the FCR image data receiving process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
9197	Error: Application software failed to wait the event in the image data receiving process.	Error detected during the self-check. WinAPI/exceptional error. An unknown event has been received when terminating the FCR image data receiving process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
9198	Error: Application software failed to close handle in the image data receiving process.	Error detected during the self-check. WinAPI/exceptional error. Failed in closing the image data file when terminating the FCR image data receiving process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
9199	Error: Application software cannot create the map file in the image data receiving process.	Error detected during the self-check. WinAPI/exceptional error. Failed in creating the image data map file when terminating the FCR image data receiving process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
919A	Error: Application software cannot create the EIF-IMG in the image data receiving process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when opening the device during the FCR image reception process.	(1) Restart the system to retransmit the image data. (2) Contact service headquarters.
919B	Error: Application software failed to close handle in the image data sending process.	Error detected during the self-check. WinAPI/exceptional error. Failed in closing the memory mapped file when terminating the FCR image data sending process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
919C	Error: Application software cannot create the EIF-IMG in the image data sending process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating the EIFIMG file during the FCR image transmission process.	(1) Restart the system to retransmit the image data. (2) Contact service headquarters.
919D	Error: Application software cannot setup the EIF-IMG in the image data sending process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while setting up the device during the FCR image transmission process.	(1) Restart the system to retransmit the image data. (2) Contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
919E	Error: Application software cannot write the EIF-IMG in the image data sending process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when outputting (writing) image data to the device during the FCR image data sending process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
919F	Error: Application software cannot create the view in the image data sending process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when creating the map view during the FCR image data sending process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
91A0	Error: Application software cannot release the view in the image data sending process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when releasing the map view during the FCR image data sending process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
91A1	Error: Application software cannot send the event in the image data sending process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while notifying the event during the FCR image transmission process.	(1) Restart This Equipment for image data transmission. (2) Contact service headquarters.
91A3	Error: Application software cannot delete the timer in the image data sending process.	Error detected during the self-check. WinAPI/exceptional error. Failed in deleting the timer during the FCR image data sending process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
91A4	Error: Application software cannot set the timer in the image data sending process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when setting the timer during the FCR image data sending process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
91A5	Error: Application software failed to wait the event in the image data sending process.	Error detected during the self-check. WinAPI/exceptional error. An unknown event of image data transmission start preparation has been sent back during the FCR image data sending process.	(1) Restart This Equipment for image data retransmission. (2) Contact service headquarters.
91A6	Error: Application software detected unexpected error in the image data sending process.	Error detected during the self-check. WinAPI/exceptional error. An unexpected error occurred during the FCR image data transmission process.	(1) Restart the system and retransmit the image data. (2) Contact service headquarters.
91A7	Error: Application software detected unexpected error in the serial data receiving process.	Error detected during the self-check. WinAPI/exceptional error. An unexpected error occurred while receiving serial channel image data.	Restart This Equipment. Contact service headquarters if error recurs.
91A8	Error: Application software cannot get the memory in the serial data receiving process.	Error detected during the self-check. WinAPI/exceptional error. Buffer for receiving image data could not be secured during the serial channel reception process.	Restart This Equipment. Contact service headquarters if error recurs.
91A9	Error: Application software cannot receive the message from SMCU device in the serial data receiving process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while reading the image data from the SMCU device.	Restart This Equipment. Contact service headquarters if error recurs.
91AA	Error: Application software cannot write the received message to the pipe in the serial data receiving process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while writing the received message during the serial data receiving process.	Restart This Equipment. Contact service headquarters if error recurs.
91AB	Error: Application software detected unexpected error in the serial data sending process.	Error detected during the self-check. WinAPI/exceptional error. An unexpected error occurred while sending serial channel image data.	Restart This Equipment. Contact service headquarters if error recurs.
91AC	Error: Application software cannot get the memory in the serial data sending process.	Error detected during the self-check. WinAPI/exceptional error. Buffer for sending image data could not be secured during the serial channel sending process.	Restart This Equipment. Contact service headquarters if error recurs.
91AD	Error: Application software failed to read the sending data from the pipe in the serial data sending process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while reading the message during the serial data sending process.	Restart This Equipment. Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
91AE	Error: Application software cannot get the event from FCR communication control process in the serial data sending process.	Error detected during the self-check. WinAPI/exceptional error. An unknown FCR termination message was received during the serial channel sending process.	Restart This Equipment. Contact service headquarters if error recurs.
91AF	Error: Application software cannot send the data to the SMCU device in the serial data sending process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while writing the image data to the SMCU device.	Restart This Equipment. Contact service headquarters if error recurs.
91B0	Error: Application software detected unexpected error in the serial channel test process.	Error detected during the self-check. WinAPI/exceptional error. An unexpected error occurred during the serial channel test process.	Restart This Equipment. Contact service headquarters if error recurs.
91B1	Error: Application software cannot get the memory in the serial channel test process.	Error detected during the self-check. WinAPI/exceptional error. Failed in securing communication buffer during the serial channel test process.	Restart This Equipment. Contact service headquarters if error recurs.
91B3	Error: Application software cannot create the timer in the serial channel test process.	Error detected during the self-check. WinAPI/exceptional error. Failed in starting the timer during the serial channel test process.	Restart This Equipment. Contact service headquarters if error recurs.
91B4	Error: Application software cannot get the event in the serial channel test process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when acquiring the event during the serial channel test process.	Restart This Equipment. Contact service headquarters if error recurs.
91B5	Error: Application software cannot stop the timer in the serial channel test process.	Error detected during the self-check. WinAPI/exceptional error. Failed in stopping the timer during the serial channel test process.	Restart This Equipment. Contact service headquarters if error recurs.
91B6	Error: Application software received invalid data in the serial channel test process.	Error detected during the self-check. WinAPI/exceptional error. An unknown message was received during the serial channel test process.	Restart This Equipment. Contact service headquarters if error recurs.
91B7	Error: Application software cannot send the time-out message in the serial channel test process.	Error detected during the self-check. WinAPI/exceptional error. Failed in sending the timeout message during the serial channel test process.	Restart This Equipment. Contact service headquarters if error recurs.
91B8	Error: The result of serial channel test is not correct.	Error detected during the self-check. WinAPI/exceptional error. The result of serial channel test is not correct.	Check status of FCR environment settings. Contact service headquarters if error recurs.
91BA	Error: Application software detected error in the serial channel test process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the serial channel test process.	Restart This Equipment. Contact service headquarters if error recurs.
91BB	Error: Application software detected problem in the serial channel test process.	Error detected during the self-check. WinAPI/exceptional error. A trouble occurred during the serial channel test process.	Restart This Equipment. Contact service headquarters if error recurs.
91BC	Error: Application software detected the exemption due to the memory shortage in the SMCU device interface class.	Error detected during the self-check. WinAPI/exceptional error. Exceptional insufficient memory capacity resulted during initialization of the SMCU device.	Restart This Equipment. Contact service headquarters if error recurs.
91BD	Error: Application software cannot open the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the SMCU device initialization process.	Restart This Equipment. Contact service headquarters if error recurs.
91BE	Error: Application software cannot reset the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while resetting the SMCU device.	Restart This Equipment. Contact service headquarters if error recurs.
91BF	Error: Application software cannot close the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while closing the SMCU device.	Restart This Equipment. Contact service headquarters if error recurs.
91C0	Error: Application software cannot modify the communication parameter of the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while modifying the SMCU device communication parameters.	Restart This Equipment. Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
91C1	Error: Application software cannot modify the JIS parameter of the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while modifying the SMCU device JIS parameters.	Restart This Equipment. Contact service headquarters if error recurs.
91C2	Error: Application software cannot receive the data from the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while receiving the command from the SMCU device.	Restart This Equipment. Contact service headquarters if error recurs.
91C3	Error: Application software cannot send the data to the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while sending the command to the SMCU device.	Restart This Equipment. Contact service headquarters if error recurs.
91C4	Error: Application software cannot send the data to the SMCU device interface due to the invalid data size.	Error detected during the self-check. WinAPI/exceptional error. Invalid data size when sending the command to the SMCU device.	Restart This Equipment. Contact service headquarters if error recurs.
91C5	Error: Application software cannot reset monitoring the break signal of the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while monitoring break signals of the SMCU device interface.	Restart This Equipment. Contact service headquarters if error recurs.
91C6	Error: Application software cannot monitor the break signal of the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while monitoring break releasing signals of the SMCU device interface.	Restart This Equipment. Contact service headquarters if error recurs.
91C7	Error: Application software cannot monitor the EOT signal of the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while monitoring EOT signals of the SMCU device interface.	Restart This Equipment. Contact service headquarters if error recurs.
91C8	Error: Application software cannot monitor the timer C signal of the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while monitoring timer C signals to the SMCU device interface.	Restart This Equipment. Contact service headquarters if error recurs.
91C9	Error: Application software cannot reset the break signal of the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while releasing break signals to the SMCU device interface.	Restart This Equipment. Contact service headquarters if error recurs.
91CA	Error: Application software cannot set the break signal of the SMCU device interface.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while setting break signals to the SMCU device interface.	Restart This Equipment. Contact service headquarters if error recurs.
91CB	Error: Application software cannot check the preparation of system termination.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when checking to wait for termination of the FCR image processing while making preparations for system termination.	Restart This Equipment. Contact service headquarters if error recurs.
91CC	Error: Application software cannot set the 'reset preparation of system termination' event.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while setting the event for releasing preparations for system termination.	Restart This Equipment. Contact service headquarters if error recurs.
91CD	Error: Application software cannot reset the 'reset preparation of system termination' event.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when resetting the event for releasing preparations for system termination.	Restart This Equipment. Contact service headquarters if error recurs.
91CE	Error: Application software cannot initialize the FCR-DMS control data channel.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while initializing the FCR-DMS communication process.	Restart This Equipment. Contact service headquarters if error recurs.
91CF	Error: Application software cannot initialize the FCR-DMS image data channel.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while initializing the FCR-DMS control data channel.	Restart This Equipment. Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
91D0	Error: Application software cannot initialize the FCR-DMS thread control object.	Error detected during the self-check. WinAPI/exceptional error. Failed in acquiring the FCR-DMS thread control event.	Restart This Equipment. Contact service headquarters if error recurs.
91D1	Error: Application software cannot initialize the FCR-DMS thread communication pipe.	Error detected during the self-check. WinAPI/exceptional error. Failed in acquiring the FCR-DMS thread communication pipe.	Restart This Equipment. Contact service headquarters if error recurs.
91D2	Error: Application software cannot initialize the FCR-DMS protocol analyze object.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while initializing the FCR-DMS protocol analysis process.	Restart This Equipment. Contact service headquarters if error recurs.
91D3	Error: Application software cannot get the memory for FCR-DMS control.	Error detected during the self-check. WinAPI/exceptional error. Exceptional insufficient memory capacity has resulted during initialization for the FCR I/F control process.	Restart This Equipment. Contact service headquarters if error recurs.
91D4	Error: Application software cannot create the thread of FCR-DMS control.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during initialization for the FCR I/F control process.	Restart This Equipment. Contact service headquarters if error recurs.
91D5	Error: Application software cannot prepare to read the data from FCR-DMS thread pipe.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while reading the message during the FCR-DMS termination event process.	Restart This Equipment. Contact service headquarters if error recurs.
91D6	Error: Application software cannot reset the break signal of FCR-DMS control data channel.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while releasing the Break signal of the FCR-DMS control data channel.	Restart This Equipment. Contact service headquarters if error recurs.
91D9	Error: Application software cannot resume the image information data.	An error occurred when storing the temporary working file created during image input the last time (failed in restoring the image information).	Delete the temporary directory's temporary working file that could not be stored and then restart the system.
91DA	Error: Application software cannot convert the image information data to the internal format.	An error occurred while storing the temporary working file created during image input the last time (failed in updating the image information).	Delete the temporary working file that could not be stored and actually is in the temporary directory, and then restart the system.
91DB	Error: Application software cannot store the image data into the file during resuming process of image receiving.	An error occurred when storing the temporary working file created during image input the last time (failed in restoring the image data).	Delete the temporary directory's temporary working file that could not be stored and then restart the system.
91DE	Error: Application software cannot read the image data to transfer in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when acquiring the image data to be sent during the FCR image output.	Restart This Equipment. Contact service headquarters if error recurs.
91DF	Error: Application software cannot read the image information data to transfer in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when acquiring the image information to be sent during the FCR image output.	Restart This Equipment. Contact service headquarters if error recurs.
91E0	Error: Application software cannot get one line data or one pixel data in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when acquiring the pixel/line values during the FCR image output.	Restart This Equipment. Contact service headquarters if error recurs.
91E1	Error: Application software cannot convert the image information data correctly in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when converting the output image information during the FCR image output.	Restart This Equipment. Contact service headquarters if error recurs.
91E2	Error: Application software received invalid message in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An unknown FCR command has been received during the FCR image output.	Restart This Equipment. Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
91E3	Error: Application software cannot read the received message in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while analyzing the FCR command during the FCR image output.	Restart This Equipment. Contact service headquarters if error recurs.
91E4	Error: Application software cannot write the message in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating or sending the FCR command during the FCR image output.	Restart This Equipment. Contact service headquarters if error recurs.
91E5	Error: Application software cannot send the event in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while notifying the FCR internal event during the FCR image output.	Restart This Equipment. Contact service headquarters if error recurs.
91E8	Error: Application software cannot reset the event in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when resetting the output completion event during the FCR image output.	Restart This Equipment. Contact service headquarters if error recurs.
91E9	Error: Application software received 'output interrupt message' from the destination device in image data output process.	This Equipment received the notification of suspending image input from Other Host during the FCR image output.	Check status of the Other Host and retry image data transmission.
91EA	Error: Application software cannot reduce the pixel size of the image in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while reducing the number of pixels of the output FCR image data.	Restart This Equipment. Contact service headquarters if error recurs.
91EB	Error: Application software detected the time-out in image data output process.	A timeout event was received during the FCR image output.	Check status of Other Hosts and retry image data transmission.
91EC	Error: Application software cannot release the timer in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when releasing the timer during FCR image data output process.	Restart This Equipment. Contact service headquarters if error recurs.
91ED	Error: Application software cannot set the timer in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while setting the timer during the FCR image output process.	Restart This Equipment. Contact service headquarters if error recurs.
91EE	Application software received error message as the response of image transfer notification message in image send process.	The Other Host rejected request for reservation of image transmission.	Check status of the Other Host and retry image data transmission.
91EF	Error: Application software failed to wait the event in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An unknown event has been notified while waiting for the internal event during the FCR image data output process.	Restart This Equipment. Contact service headquarters if error recurs.
91F0	Error: Application software cannot find the specified image ID number in the exclusive process list.	Error detected during the self-check. WinAPI/exceptional error. An attempt was made to exclusively release an image that has not been locked exclusively for deletion.	Restart This Equipment. Contact service headquarters if error recurs.
91F1	Error: Application software cannot delete the image due to the image is used by other process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while releasing the lock that impedes to delete the image data.	Restart This Equipment. Contact service headquarters if error recurs.
91F2	Error: The index in the exclusive process list is invalid.	Error detected during the self-check. WinAPI/exceptional error. An unknown image ID has been specified for acquisition of the exclusive list for image deletion.	Restart This Equipment. Contact service headquarters if error recurs.
91F3	Error: The specified database is invalid.	Error detected during the self-check. WinAPI/exceptional error. An unknown database access type has been specified during the exclusive image deletion process.	Restart This Equipment. Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
91F4	Error: Application software cannot get the permission to access to the image database.	Error detected during the self-check. WinAPI/exceptional error. The database access right acquisition message has sent an error back.	Restart This Equipment. Contact service headquarters if error recurs.
91F5	Error: Application software detected unexpected error in the process of deleting the image exclusively.	Error detected during the self-check. WinAPI/exceptional error. An unexpected error occurred during the exclusive image deletion process.	Restart This Equipment. Contact service headquarters if error recurs.
91F6	Error: Application software cannot map the view in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while mapping the output image data onto memory during the image data output process.	Restart This Equipment. Contact service headquarters if error recurs.
91F7	Error: Application software cannot un-map the view in image data output process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when releasing the image data mapped onto memory during the FCR image data output process.	Restart This Equipment. Contact service headquarters if error recurs.
91F8	Error: Application software cannot get the memory for communication in image data input process.	Error detected during the self-check. WinAPI/exceptional error. Exceptional insufficient memory resulted when securing communication buffer during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
91FA	Application software cannot make the response message to the image transfer notification message in image input process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating a command for responding to reservation of image transmission during the FCR image input process.	Restart This Equipment. Contact service headquarters if error recurs.
9207	Error: Application software received unexpected command from the destination in FCR-DMS communication process.	An unknown FCR command has been received from the Other Host during the FCR-DMS communication process.	Check status of the Other Host and retry image data transmission.
9208	Error: Application software failed to wait the event in FCR-DMS communication process.	An unknown event has been communicated from the Other Host during the FCR-DMS communication process.	Check status of the Other Host and retry image data transmission.
920A	Error: Application software received the request of connection, but cannot get the destination host name.	Error detected during the self-check. WinAPI/exceptional error. Failed in completing the destination host name during the external request standby process.	Using the Field Tool, check that network settings are correct.
920B	Error: Application software failed to wait the termination of all processes created by the requests through network.	Error detected during the self-check. WinAPI/exceptional error. Failed in normally terminate the external request standby process.	Manually terminate the sub-system using the Task Manager.
920C	Error: Application software failed to monitor the timer for receiving multiple images.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while waiting for transmission of next image during the transmission process of a multiple number of images.	Restart This Equipment. Try image data retransmission from the device that retransmits the image data.
920D	Error: Application software cannot start the FCR-DMS serial communication channel test process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when starting the thread for the FCR-DMS serial communication channel test process.	Restart This Equipment. Contact service headquarters if error recurs.
920E	Error: Application software cannot start the FCR-DMS image receiving process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when starting the thread for the FCR-DMS image input process.	Restart This Equipment. Contact service headquarters if error recurs.
9215	Error: Application software cannot interrupt the FCR-DMS communication process.	An error detected during the self-check (WinAPI error/unexpected error) or an error occurred while interrupting the thread for the FCR image processing.	Restart This Equipment. If error recurs, contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9216	Error: Application software cannot interrupt the FCR-DMS communication process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while receiving the FCR process termination command.	Restart This Equipment. Contact service headquarters if error recurs.
9217	Error: Application software cannot send the command to interrupt the multiple image receiving process.	An error detected during the self-check (WinAPI error/unexpected error) or an error occurred while sending the command advising the completion of transmission of a multiple number of FCR images.	Restart This Equipment. If error recurs, contact service headquarters.
9219	Error: Application software cannot reset the exclusive setting to the image.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while unlocking exclusive image data deletion.	Restart This Equipment. Contact service headquarters if error recurs.
921A	Error: The image information data is invalid in the 'image reserve command'.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while analyzing the image reservation request command during the external image reservation process.	Check status of the device that reserved the image data and retry image transmission.
921B	Error: Application software cannot get the image information data for reserved image.	Error detected during the self-check. WinAPI/exceptional error. Failed in acquiring image information for the reserved image.	Check status of This Equipment and the Other Host. Also check status of the reserved image. Restart This Equipment and retry image transmission. Contact Field Engineer.
921C	Error: Application software cannot find the necessary image information data in the local database.	The image data reserved is not included in the local database. It may have already been deleted.	For both This Equipment and the Other Host, make sure that the reserved image is correct.
921D	Error: Application software cannot create the queue for reserved image.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating queue for the reserved image.	Restart This Equipment. Contact service headquarters if error recurs.
921E	Error: Application software cannot send the 'image reserve response command'.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while transmitting the image reservation response command.	Restart This Equipment. Contact service headquarters if error recurs.
921F	Error: The status of exclusivity control of image is invalid.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the exclusive image process.	Restart This Equipment. Contact service headquarters if error recurs.
9220	Error: Application software cannot process exclusively to lock the received image not to be deleted.	Error detected during the self-check. WinAPI/exceptional error. An error occurred during the exclusive deletion process of acquired images.	Restart This Equipment. Contact service headquarters if error recurs.
9221	Error: Application software cannot reset the exclusivity status to the received image.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while releasing exclusive deletion of acquired images.	Restart This Equipment. Contact service headquarters if error recurs.
9222	Error: Application software cannot create the thread to cancel the reservation of the image.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when creating the thread to cancel the reservation of the image.	Restart This Equipment. Contact service headquarters if error recurs.
9223	Error: Application software cannot receive other images than CR.	An attempt was made to transmit images of modalities other than the CR while inputting FCR or FNIP images.	Do not handle image modalities other than the CR by the FCR or FNIP. Check images of the Other Host.
9224	Error: Application software cannot receive HQ image of FCR.	When transmitting an FCR HQ image as reserved, with the item of "Send a HQ image of reduced pixels" checked for network settings (FINP) of This Equipment for configuration management, status of incorrect size is sent back to the Other Host, prompting it to reduce the number of pixels. At this time, "Handle only standard images" should have been selected for hardware settings of This Equipment.	Check to see if configuration management settings of This Equipment can handle HQ images.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9225	Error: Application software cannot receive HQ image of FCR.	An attempt to send an FCR HQ image was made although HQ images cannot be handled in This Equipment.	Nothing needs be done if the Other Host sends the image data of reduced pixels when image data transmission was requested.
9226	Error: Application software cannot receive HQ image of FCR.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters.
9227	Error: The connected equipment replies image information is irrelevant.	The Other Host sent back invalid image data when responding to reservation of image data transmission.	Check that the image data to be transmitted is correct.
9228	Error: The connected equipment replies image compression ratio is irrelevant.	The Other Host sent back invalid data compression code when responding reservation of image data transmission.	Check that the image data to be transmitted is correct.
9229	Error: The reduction request of image by the connected equipment is irrelevant.	The Other Host sent back request for reducing the number of pixels, but pixel reduction process has been disabled in This Equipment.	(1) Modify settings. (2) Modify the image data reception device so that it can receive HQ images.
922A	Error: The connected equipment's disk is full.	The Other Host sent back response informing that the disk capacity was not sufficient.	Secure sufficient disk capacity in the Other Host and retry image data transmission.
922B	Error: The connected equipment replies image bit format is irrelevant.	The Other Host sent back information that both effective bits and assigned bits are invalid.	Check that the image data to be transmitted is correct.
922C	Error: Cannot communicate with the connected equipment.	Notification was issued informing that an unrecoverable error occurred in the Other Host.	Check status of the Other Host. Restart the system as required for retrying image data transmission.
922D	Error: The connected equipment needs help.	Notification was issued informing that an error requiring user intervention occurred in the Other Host.	Check status of the Other Host. Restart the system as required for retrying image data transmission.
922E	Error: The connected equipment rejects receiving an image.	Notification was issued informing that the Other Host rejected to receive the image data.	Check status of the Other Host. Restart the system as required for retrying image data transmission.
9230	Error: The connected equipment cannot receive a HQ image.	Notification was issued informing that the Other Host could not receive HQ images.	(1) Check that Cross.tbl file settings are correct. (Only the binary editor can be used.) (2) Check that the process for reducing the number of pixels has been enabled as set by the configuration management of This Equipment.
9231	Error: A communication error in the image transfer requesting phase.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while checking image data transmission.	Check network settings and operating environment in both This Equipment and the Other Host for retrial of image data transmission.
9232	Error: Cannot allocate enough memory.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9233	Error: Cannot delete a temporal image in the image output sequence.	Error detected during the self-check. WinAPI/exceptional error. When distributing image data or generating hard copies, failed in deleting output images, which should have been deleted after queue registration, while being created to the temporary database.	Restart This Equipment. Contact service headquarters if error recurs.
9234	Error: It was failed to send the response for image transfer reserve in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while responding to reservation of image transmission during the FCR image input process.	Restart This Equipment. Contact service headquarters if error recurs.
9235	Error: It was denied to receive the image transfer request from connected device.	An error has been detected during the self-check. WinAPI/exceptional error. Request for image transmission as reserved was refused during the FCR image data input process.	Check FCR settings of This Equipment and retry image data transmission.
9236	Error: It was failed to assign the internal ID number for temporal image file in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating the temporary working file for image data input during the FCR image input process.	Check that there are no unnecessary temporary working files in the temporary directory. Restart the system.
9237	Error: It was failed to open the temporal image file in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. Failed in opening the temporary storage file for image data input during the FCR image input process.	Check that there are no unnecessary temporary working files in the temporary directory. Restart the system.
9238	Error: It was failed to prepare the receiving command from initiator in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while reading the command from the image data reception buffer during the FCR image input process.	Check that the image data to be transmitted is correct.
9239	Error: It was occured timeout to wait the receiving command from initiator in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. A timeout has resulted while waiting for receiving the command from the Other Host during the FCR image input process.	Check that the image data to be transmitted is correct.
923A	Error: It was occured timeout to wait the receiving command from initiator in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while waiting for receiving command from the Other Host during the FCR image incoming process.	Make sure that the image to be sent is a correct one.
923B	Error: It was failed to recognize the received command in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while analyzing the command from the Other Host during the FCR image input process.	Check that the image data to be transmitted is correct.
923C	Error: It was failed to send the response for reparing image transfer in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while sending the standby response for image data transmission during the FCR image input process.	Restart This Equipment. Contact service headquarters if error recurs.
923D	Error: It was failed to send the response for reparing image transfer in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when sending instructions to start image data reception during the FCR image input process.	Restart This Equipment. Contact service headquarters if error recurs.
923E	Error: It was failed to wait the end of prepare for image receive in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while waiting for the completion of preparations to receive image data during the FCR image input process.	Restart This Equipment. Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
923F	Error: It was failed to set the timer for the end of image receive in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when setting the timer while waiting for the completion of reception of image data during the FCR image input process.	Restart This Equipment. Contact service headquarters if error recurs.
9240	Error: It was failed to create the request for sending image information in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when creating the command for requesting transmission of the image information during the FCR image input process.	Restart This Equipment. Contact service headquarters if error recurs.
9241	Error: It was failed to send the request for sending image information in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when sending the command for requesting transmission of the image information during the FCR image input process.	Restart This Equipment. Contact service headquarters if error recurs.
9242	Error: It was quitted to proceed the CR image incoming process by the request from initiator.	According to request coming from the Other Host for suspending transmission of FCR image data while inputting FCR images, the image input process was interrupted.	Check status of the Other Host.
9243	Error: It was quitted to proceed the CR image incoming process by the receiving unexpected command from initiator.	Processing suspended because the Other Host issued an unknown FCR command during the FCR image input process.	Check status of the Other Host.
9244	Error: It was failed to create the response of prepare for image receiving in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when creating standby response for image data transmission during the FCR image input process.	Restart This Equipment. Contact service headquarters if error recurs.
9245	Error: It was failed to convert the CR image information to internal format in CR image incoming process.	An error occurred while converting the FCR image information to the internal format during the FCR image input process. This error can be attributed to invalid conversion logic (program error) or invalid data value of the received data.	Contact service headquarters.
9246	Error: It was failed to open the temporal image file in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. Failed in opening the temporary storage file for image data input during the FCR image input process.	Copy the file of the temporary directory (D:\Temp) onto another directory and delete it. Restart the system for retransmission of image data. Contact service headquarters and send the file as necessary.
9247	Error: It was failed to write CR image information to the file in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. Failed in writing the image information to the temporary working file during the FCR image input process.	Copy the file of the temporary directory (D:\Temp) onto another directory and delete it. Restart the system for retransmission of image data. Contact service headquarters and send the file as necessary.
9248	Error: It was failed to close the CR image information file in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when closing the image information file during the CR image receiving process.	Copy the file of the temporary directory (D:\Temp) onto other directory. Restart the system for retransmission of image data. Contact service headquarters. Send the file to service headquarters.
9249	Error: It was failed to release the timer for the end of image receive in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when releasing the timer for reception of image data during the FCR image input process.	Restart This Equipment. Contact service headquarters if error recurs.
924A	It was quitted the CR image incoming process by the indication with the failure of image outgoing process from initiator.	According to notification coming from the Other Host of failure in transmission of FCR image data, the image input process was suspended.	Check status of the Other Host and retry image transmission.
924B	Error: It was occured timeout to wait the end of receiving CR image from initiator in CR image incoming process.	Timeout for the completion of reception of image data notified by the Other Host during the FCR image data input process.	Check status of the Other Host and retry image data transmission.

Message No.	Error Message	Conditions and Causes of Error	Remedies
924C	Error: It was failed to wait the end of receiving CR image from initiator in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. The Other Host has issued an unknown command during the CR image incoming process.	Check status of Other Host and try retransmission of the image data.
924D	Error: It was failed to create the indication for the end of transferring CR image in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating the command that notifies termination of image transmission during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
924E	Error: It was failed to send the indication for the end of transferring CR image in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while sending the command that notifies termination of image transmission during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
924F	Error: It was failed to create the setting of event for the occuring timeout in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while setting the timeout event during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
9251	Error: It was failed to allocate the area for storing CR image information in CR incoming process.	Error detected during the self-check. WinAPI/exceptional error. An exceptional insufficient memory error resulted when storing CR image information during the CR image incoming process.	Restart This Equipment. Contact service headquarters if error recurs.
9252	Error: It was failed to get the database access handle for displaying image in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when acquiring the database access handle during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
9253	Error: It was failed to create the storing CR image information for database in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An exceptional insufficient memory error resulted when creating image information to be stored in database during the CR image incoming process.	Restart This Equipment. Contact service headquarters if error recurs.
9254	Error: It was failed to store the CR image information for database in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when storing image information database during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
9255	Error: It was failed to store the CR image for database in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while storing the image data database during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
9256	Error: It was failed to create the update information for CR image information in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating the image data updating information during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
9257	Error: It was failed to allocate the area for updating CR image information in CR incoming process.	Error detected during the self-check. WinAPI/exceptional error. An exceptional insufficient memory error resulted while updating image data information after the database has been stored during the FCR image input process.	Restart This Equipment. Contact service headquarters if error recurs.
9258	Error: It was failed to allocate the area for updating CR image information in CR incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while updating the image data after database has been stored during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
9259	Error: It was failed to get the table for information with image delivering in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An exceptional insufficient memory error resulted when acquiring the table for information with image delivering during the CR image incoming process.	Restart This Equipment. Contact service headquarters if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
925A	Error: It was failed to create the information with all delivering in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating the all-delivery information during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
925B	Error: It was failed to create the information with image delivering by delivering code in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating the code delivery information during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
925C	Error: It was failed to create the information with image deliver by property in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating the properties delivery information during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
925D	Error: It was failed to get the temporal access handle for database in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when acquiring the database access handle for temporary image data storage during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
925E	Error: It was failed to create the update information for CR image information in CR image incoming process.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while creating the image information group for image data update during the FCR image data input process.	Restart This Equipment. Contact service headquarters if error recurs.
925F	Error: It was failed to allocate the area for updating CR image information in CR incoming process.	Error detected during the self-check. WinAPI/exceptional error. An exceptional insufficient memory error resulted while updating image information during the FCR image input process.	Restart This Equipment. Contact service headquarters if error recurs.
9260	It was failed to get this machine code.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when acquiring the model code of This Equipment.	Check if the configuration management setup file is damaged or the system installed correctly and the restart the system for retrial.
9261	It was failed to get the information with the ability for processing high density image.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when acquiring the information on whether or not This Equipment can handle high-quality image processing.	Check if the configuration management setup file is damaged or the system installed correctly and the restart the system for retrial.
9263	There is the inconsistency to make FCR/DMS command.	Error detected during the self-check. WinAPI/exceptional error. An attempt to process an unknown message was tried while creating the FCR command.	Restart the system. Retry the FCR image data transmission. Contact Field Engineer if error recurs.
9264	It was received the unexpected / invalid FCR/DMS command.	Error detected during the self-check. WinAPI/exceptional error. An undefined or incorrect FCR command has been received.	Restart the system and retry image data transmission. Contact Field Engineer if error recurs.
9265	It was received the invalid FCR/DMS command.	Error detected during the self-check. WinAPI/exceptional error. An undefined or incorrect FCR command has been received.	Restart the system and retry image data transmission. Contact Field Engineer if error recurs.
9266	It was received the failure report with serial connection test from target device.	The FCR-connected Other Host has reported failure in serial channel test.	Check FCR device settings and connection status of This Equipment and Other Hosts.
9267	It was received the incorrect serial connection test characters from target device.	Incorrect serial channel test characters have been sent from the FCR-connected Other Host.	Check FCR device settings and connection status of This Equipment and Other Hosts.
9268	It was failed to recognize FCR/DMS command from target device.	An error detected during the self-check (WinAPI error/unexpected error) or an error occurred while analyzing the FCR command received from the Other Host.	Restart the system or retry FCR image transmission. If error recurs, contact Field Engineer.
926B	It was failed to set the break signal with FCR/DMS control connection.	Error detected during the self-check. WinAPI/exceptional error. Failed in releasing the Break signal of the FCR-DMS control data channel.	Restart the system and retry image data transmission. Contact Field Engineer if error recurs.

Message No.	Error Message	Conditions and Causes of Error	Remedies
926C	It is incorrect the binary information in image information from target device.	The binary value of the received image information is not correct.	Confirm that the correct image has been transmitted from the transmitter device. Check that CR settings of This Equipment and Other Hosts are correct. Restart the system and retry image data transmission.
926E	It was failed to start the FCR monitoring thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when starting the FCR monitoring thread.	Restart This Equipment. Contact service headquarters if error recurs.
926F	It was failed to resume the FCR monitoring thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when resuming the FCR monitoring thread.	Restart This Equipment. Contact service headquarters if error recurs.
9270	It was occurred timedout with the waiting the end of FCR monitoring thread.	Error detected during the self-check. WinAPI/exceptional error. Operation terminated forcibly due to timeout when finishing the FCR process thread.	If the system does not complete normally, manually terminate the sub-system using the task manager function.
9271	It was failed to wait the end of FCR monitoring thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when finishing the FCR process thread.	If the system does not complete normally, manually terminate the sub-system using the task manager function.
9272	It was failed to get the end code of FCR monitoring thread.	Error detected during the self-check. WinAPI/exceptional error. An error occurred when acquiring the FCR processing thread termination code.	If the system does not complete normally, manually terminate the sub-system using the task manager function.
9273	It was failed to set image processing information in the resistration process foe FCR image out.	Error detected during the self-check. WinAPI/exceptional error. An error occurred while specifying whether or not to reduce the number of pixels when registering FCR images for output or while specifying the data compression ratio.	Restart This Equipment. Contact service headquarters if error recurs.
9274	It was failed to reset the EIFIMG with image receiving connection process.	Failure in FCR image data transmission notified by the Other Host.	Check that the output image is correct. Check FCR settings, restart the system and retry image data transmission.
9275	It will be failed to lock the SMCU device control.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
9276	It was failed to lock the SMCU device control.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
9277	It was failed to unlock the SMCU device control.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
9278	It was failed to initialize the SMCU device control.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
9279	It was failed to unlock the SMCU device control due to lock by other thread.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
927A	It will be failed to lock the EIFIMG device control.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
927B	It was failed to lock the EIFIMG device control.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
927C	It was failed to unlock the EIFIMG device control.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
927D	It was failed to initialize the EIFIMG device control.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
927E	It was failed to unlock the EIFIMG device control due to lock by other thread.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment. Contact service headquarters if error recurs.
927F	Error was ocurred to generate the DICOM request control thread.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment.

Message No.	Error Message	Conditions and Causes of Error	Remedies
9280	Error was occurred to store image to D/B in the DICOM recovery process.	The last DICOM image data input process may have been disabled due to a data error.	View the Event Viewer for checking the previous logs and correct it as necessary. Delete the DCMXXXXX.dcm and DCMXXXXX.cmp files contained in the TEMP directory of the drive (basically D:) where the database exists.
9281	Error was occurred in the process with the control for DICOM file ID.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment to retry DICOM transmission.
9282	It was failed to store DICOM image data.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment and retry DICOM transmission.
9283	It was failed to establish association in the process of send image by DICOM.	An error occurred during the DTK transmission syntax registration process or the connection request process while DICOM data was being output.	• Check whether the Other Host has been started or waiting for image data input. • Make sure that the network has been connected correctly. • Using the Field Tool, recheck that settings for the Other Host have been made correctly.
9284	It was failed to send image by DICOM.	An error occurred during the DTK connection release process or the error information acquisition process while DICOM data was being output.	• Check whether the Other Host has been started or waiting for image data input. • Make sure that the network has been connected correctly. • Using the Field Tool, recheck that settings for the Other Host have been made correctly.
9285	It was failed to get the result for association establishment in the process of send image by DICOM.	The result of request for image data transmission to the Other Host cannot be acquired during DICOM output.	• Check whether the Other Host has been started or waiting for image data input. • Make sure that the network has been connected correctly. • Using the Field Tool, recheck that settings for the Other Host have been made correctly.
9286	It was failed to wait request from external device by DICOM.	• The application software may not have been installed correctly. • The configuration management sub-system file (*.env) may have been destroyed. • The ODBC driver recommended for This Equipment may not have been installed. • The number for DICOM network input connection registered to the registry may have been outside the limit (1-4).	• Reinstall the application software if error recurs even after This Equipment has been restarted. • Install the ODBC driver recommended for This Equipment. • Modify the number for DICOM network input connection to within the limit value (1-4).
9287	It was failed to generate the DICOM stream.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment and retry DICOM transmission.
9288	There is insufficient AE information. Please make confirmation with the setup for destination devices.	In DICOM settings of the Other Host in the Field Tool, there are no settings for AEs in accordance with the image data that is to be transmitted.	Set the AE information that can be set up in accordance with the Other Host in the Field Tool.
9289	It was failed to handle image information class.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment and retry DICOM transmission.
928A	It was failed to regist or update the DICOM component ocx.	Error detected during the self-check. WinAPI/exceptional error.	Restart This Equipment and retry DICOM transmission.
928B	It was failed to erase the temporal file for send DICOM image.	The temporary file could not be deleted (because it has been damaged or deleted for any reasons).	Delete the XXXXX.stm file contained in the TEMP directory of the DB drive.
928D	Timeout reqsponse was received from DICOM component in the association establishment.	Timeout has resulted for request for connection to the Other Host during DICOM output.	• Check status and settings of the Other Host and retry image data transmission from the queue. • Increase the timeout value for DICOM setup with the Field Tool.

Message No.	Error Message	Conditions and Causes of Error	Remedies
928E	Timedout reqsponse was received from DICOM component in the sending image.	Timeout has resulted for request for connection to the Other Host during DICOM output.	• Check status and settings of the Other Host and retry image data transmission from the queue. • Increase the timeout value for DICOM setup with the Field Tool.
928F	It was failed to convert DICOM data.	Error detected during the self-check. WinAPI/exceptional error.	If error recurs even when This Equipment has been restarted, delete the DCMXXXX.dcm and DCMXXXX.cmp files in the TEMP directory in which the DB of This Equipment is contained. Then, retry DICOM transmission.
9290	Timedout reqsponse was received from DICOM component in the service request or release association.	The Other Host may have been operated incorrectly.	• Check status and settings of the Other Host and retry DICOM transmission. • Check to see using the Field Tool that the image data to be input and its transmission method (JPEG or original image transmission) match settings in t he Other Host.
9291	Specified image could not send. There is insufficient information in this image.	When reserving the FCR or FINP/FNIP output, the queue was not registered because the image data for transmission did not have necessary information.	The FINP or FCR cannot handle some of the images transmitted via the DICOM. Images that can be output are as follows. <FCR> • Effective number of bits: 10 • Size code available <FINP> • Effective number of bits: 8 or 10 • Size code available • Both vertical and horizontal pixel sizes available • Test date and time included • SampelPerPixel=1
9292	It was failed to terminate request process to the external device by DICOM.	Error detected during the self-check. WinAPI/exceptional error.	Press the [OK] button in the error message box to proceed to terminate the sub-system.
9293	Error: Program error.	Error detected during the self-check. WinAPI/exceptional error.	Press the [OK] button in the error message box to proceed to terminate the sub-system.
9295	Image could not send. There is insufficient resource in the destination device.	No disk area available in the Other Host.	Sucure disk area in the Other Host and retransmit the image data.
9296	Image could not send. There is some inconsistency in the image information.	The DICOM data of This Equipment cannot be stored in the Other Host.	Recheck specifications of the Other Host and This Equipment for DICOM transmission image type, transmission syntax, etc.
9297	There is some inconsistency in the image information. Please make confirmation the outgoing image.	The DICOM data of This Equipment can be stored in the Other Host, but there are some discrepancies.	Recheck specifications of the Other Host and This Equipment.
9298	Image could not deriver to the destination using current setup. Please make confirmation with the network configuration.	This error occurs when DICOM support has been set to OFF status for This Equipment, even though it has been set to ON for the destination of image data distribution. Also occurs when no protocols have been set to the Other Host. (This error will basically never occur.)	• Set DICOM support for This Equipment to ON status. • Change protocol settings for the destination device. • Deselect "Destination for delivery".
9299	There is no configuration to send this image. Please make confirmation with network configuration.	No settings for the SOP class UID of the image data that is to be transmitted are not available in the DICOM network settings of This Equipment.	Configuration management (Field Tool) setup: Set the correct SOP class UID for DICOM network settings of This Equipment.

Message No.	Error Message	Conditions and Causes of Error	Remedies
929A	It is failed to connect for destination device. Please make sure the network configuration or status of the destination.	DTK sent back the error indicating that the Other Host has not been connected. An error occurred when connecting the Other Host.	• Check whether the Other Host has been started or waiting for image data input. • Make sure that the network has been connected correctly. • Using the Field Tool, recheck that settings for the Other Host have been made correctly.
929B	It was denied to connect for the destination device. Please make confirmation with network configuration.	DTK has sent back the error indicating that the request was rejected by the Other Host. Either request for connection or transmission was rejected.	• Check that configuration management settings for the Other Host that have been set in This Equipment actually match the environment of the Other Host. • Chcek to see that the image data that is to be transmitted and its transmission method (JPEG or original image transmission) can actually be set up in the Other Host.
929C	It is incorrect the binary information in image information from target device.	Incorrect values have been specified in HYPER processing parameters for binary information relevant to the input FCR images.	Check image information and image processing parameters from target device and retransmit the image data.
929D	It is incorrect the binary information in image information from target device.	Incorrect values have been specified in PEM processing parameters for binary information relevant to the input FCR images.	Check image information and image processing parameters from target device and retransmit the image data.
929E	Error was occurred by receiving image. The study date is invalid.	An attempt was made by the Other Host to send an image of incorrect study date.	Make sure that the image data sent by the Other Host is correct.
929F	Error was occurred by receiving image. The study time is invalid.	An attempt was made by the Other Host to send an image of incorrect study time.	Make sure that the image data sent by the Other Host is correct.
92A0	Error was occurred by receiving image. The code of modality is invalid.	The Other Host is trying to send an image of invalid modality (value not existing or outside the range).	Make sure that the image data coming from the Other Host is correct.
92A1	Error was occurred by receiving image. The anatomical menu code is invalid.	The Other Host is trying to send an image of invalid anatomical menu code (value not existing or outside the range).	Make sure that the image data coming from the Other Host is correct.
92A2	Error was occurred by receiving image. The FCR image ID # is invalid.	The Other Host is trying to send an image of invalid FCR image ID # (value not existing or outside the range).	Make sure that the image data coming from the Other Host is correct.
92A3	Error was occurred by receiving image. The number of row is invalid.	The Other Host is trying to send an image of invalid number of rows (value not existing or outside the range).	Make sure that the image data coming from the Other Host is correct.
92A4	Error was occurred by receiving image. The number of column is invalid.	The Other Host is trying to send an image of invalid number of columns (value not existing or outside the range).	Make sure that the image data coming from the Other Host is correct.
92A5	Error was occurred by receiving image. The value of stored bit is invalid.	The Other Host is trying to send an image of invalid value of stored bits (value not existing or outside the range).	Make sure that the image data coming from the Other Host is correct.
92A6	Error was occurred by receiving image. The extended image size code is invalid.	The Other Host is trying to send an image of invalid extended size (value not existing or outside the range).	Make sure that the image data coming from the Other Host is correct.
92A7	Error was occurred by receiving image. The transferred image cannot handled.	The Other Host is trying to send an image other than overlay, thumbnail or original images.	Make sure that the image data coming from the Other Host is correct.
92A8	Error was occurred by receiving image. The compression code is invalid.	The Other Host is trying to send an image compressed by an invalid code.	Make sure that the image data coming from the Other Host is correct.
92A9	Error was occurred by receiving image. The value of allocated bit is invalid.	The Other Host is trying to send an image of invalid allocated bit (value not existing or outside the range).	Make sure that the image data coming from the Other Host is correct.
92AA	Error was occurred by receiving image. The value of valid bit is invalid.	The Other Host is trying to send an image of invalid bit (value not existing or outside the range).	Make sure that the image data coming from the Other Host is correct.

Message No.	Error Message	Conditions and Causes of Error	Remedies
92AB	Error was occurred by receiving image. The data size of image is invalid.	Data size of the image that the Other Host is trying to send is invalid.	Make sure that the image data coming from the Other Host is correct.
92AC	Error was occurred by receiving image. The number of pixel in horizontal direction is invalid.	The Other Host is trying to send an image of invalid number of pixels (value not existing or outside the range).	Make sure that the image data coming from the Other Host is correct.
92AD	Error was occurred by receiving image. The number of pixel in vertical direction is invalid.	The Other Host is trying to send an image of invalid number of lines (value not existing or outside the range).	Make sure that the image data coming from the Other Host is correct.
92AE	Error was occurred by receiving image. The direction of scanning on image is invalid.	The Other Host is trying to send an image of invalid scanning direction (value not existing or outside the range).	Make sure that the image data coming from the Other Host is correct.
92AF	There is no exist the Image Display Format for DICOM Print process.	Input image information is incorrect.	Check status of the input device. Restart the system and reinput the image.
92B0	There is no exist the Film Orientation for DICOM Print process.	Input image information is incorrect.	Check status of the input device. Restart the system and reinput the image.
92B1	There is no exist the Image Position for DICOM Print process.	Input image information is incorrect.	Check status of the input device. Restart the system and reinput the image.
92B2	There is no exist the value of Rows for DICOM Print process.	Input image information is incorrect.	Check status of the input device. Restart the system and reinput the image.
92B3	There is no exist the value of columns for DICOM Print process.	Input image information is incorrect.	Check status of the input device. Restart the system and reinput the image.
92B4	There is no exist the Pixel Representation for DICOM Print process.	Input image information is incorrect.	Check status of the input device. Restart the system and reinput the image.
92B7	It cannot to reserve the outgoing process. The value of Image Display Format is out of range for DICOM Print process.	Input image information is incorrect.	Check image information transmitted by the input device. Restart the system and retry image input.
92B8	There is no exist Extended Reading Size in the image information for DICOM Print process.	Input image information is incorrect.	Check image information transmitted by the input device. Restart the system and retry image input.
92B9	There is no exist Image Scanning Direction in the image information for DICOM Print process.	Input image information is incorrect.	Check image information transmitted by the input device. Restart the system and retry image input.
92BA	It was failed to get the print information with the specified DICOM Print AE-title. Please make confirmation with the contents of the configuration file.	Contents of the configuration management setup file (DICOMPrint.env) are incorrect or input image information is incorrect.	No AE for the node of data transmission destination has been specified in the DICOMPrint.env file. Specify AE in the DICOMPrint.env file for restarting the system.
92BB	Identification key for getting the BIN number is illegal. Please make confirmation with the contents of the configuration file.	Contents of the configuration management setup file (FilmDst.env) are incorrect or input image information is incorrect.	Confirm contents of the configuration management setup file.
92BD	It was failed to create the Film Session for DICOM Print process.	Information for image data printout is incorrect or an error occurred on the printer side.	Confirm status of the printer side device or check the configuration management setup file. Restart the system and retry image data input.
92BE	It was failed to create the Film Box for DICOM Print process.	Information for image data printout is incorrect or an error occurred on the printer side.	Confirm status of the printer side device or check the configuration management setup file. Restart the system and retry image data input.
92BF	It was failed to set the image to the Film Box for DICOM Print process.	Information for image data printout is incorrect or an error occurred on the printer side.	Confirm status of the printer side device or check the configuration management setup file. Restart the system and retry image data input.

Message No.	Error Message	Conditions and Causes of Error	Remedies
92C0	It was failed to do the Printing for DICOM Print process.	An error occurred on the printer side.	Confirm status of the printer side device or check the configuration management setup file. Restart the system and retry image data input.
92C1	DICOM Print process cannot proceed because of unsupported number of bit image.	The valid bit number of the image data for printout is other than 8, 10 or 12.	Images of valid bit number other than 8, 10 or 12 cannot be printed via DICOM.
92C2	Program error was occurred because of the illegal number of image in requested output format for DICOM Print process.	A multiple numbers of images have been specified for 2on1 printout.	Incorrect input image or program error.
92C4	There is no AE-title information in the destination device. Please make confirmation with the contents of the configuration file.	No Print SOP has been specified for configuration management setup.	Configuration management setup: Using the DICOM-AE, add Print SOP for retrial.
92C5	Program error was occurred because of the existence of the different value in the Image Display Format in each images.	Different values have been specified mixed in the Image Display Format for images belonging to the same group.	Incorrect input image or program error.
92C6	Program error was occurred because of the number of image in one group.	One set consists of 0 or 4 or more images.	Incorrect input image or program error.
92C7	Program error was occurred because of the failure of the conversion of DICOM Print data.	System operation error.	Restart the system and perform the same operation again.
92C8	There is the illegal behavior of the DICOM Printer.	The DICOM printer behavior is illegal. Reference Image Box Sequence is incorrect in the N-CREATE command of the Basic Film Box.	There is a problem with the DICOM printer. Contact the printer vendor.
92C9	Program error is occurred because of the illegal image information. It cannot to output to DICOM Printer.	Image data available is not sufficient for printout.	Restart the system and retry the same operational conditions.
92CA	Program error is occurred because of the error in the common class in the conversion of DICOM Print data.	A common-class error occurred.	Using the Event Viewer, view the error immediately before this one.
92CB	Program error is occurred because of the error in the management of configuration in the proceeding of DICOM Print out.	A configuration management error occurred.	Using the Event Viewer, view the error immediately before this one.
92CC	Program error is occurred because of the error in the DICOM Print out.	System operation error.	Restart the system and perform the same operation again.
92CD	It was timed out because of the no response from the DICOM printer.	No responses come from the DICOM printer.	Check status of the DICOM printer.
92CE	There is no connection establishment with DICOM printer.	No connection has been established with the DICOM printer.	Network connection with the DICOM printer has been disconnected or the DICOM printer has not been started.
92CF	Program error was occurred because of the error in DICOM OCX component.	The DICOM OCX component sent back an unexpected error.	Restart the system and perform the same operation again.
92D0	Error was sent back from DICOM printer. (BFS N-CREATE)	The DICOM printer sent back an error.	Check if values specified for MEDIUM_TYPE, FILM_DESTINATION of the DICOMPrint.env file for configuration management are supported by the DICOM printer.

Message No.	Error Message	Conditions and Causes of Error	Remedies
92D1	Error was sent back from DICOM printer. (BFB N-CREATE)	The DICOM printer sent back an error.	Check if values specified for FILM_SIZE_ID, MAG_TYPE, SMOOTHING_TYPE, BORDER_DENSITY, TRIM of the DICOMPrint.env file for configuration management are supported by the DICOM printer.
92D2	Error was sent back from DICOM printer. (BIB N-SET)	The DICOM printer sent back an error.	Check if values specified for REQ_IMG_SIZE, 10BITS_STORED of the DICOMPrint.env file for configuration management are supported by the DICOM printer. If values specified for REQ_IMG_SIZE are supported, check also that MAG_TYPE is not NONE and the values specified for the ImgSize.env file are correct.
92D3	Program error was occurred because of the failure in the creating film strings.	A program error occurred while creating film annotation characters.	Contact SE.
92D4	Error was occurred in the creating bitmap image of film strings.	An error has been sent back by the component for creating film annotation character bitmap.	Contact SE.
92D5	There is no assignment for the format in the film strings configuration file.	Format numbers not set for the film annotation characters setup file have been specified.	Specify format for the format number that has been recorded to the ImgSize.env file.
92D6	Error was occurred in the process of the analysis of film strings configuration file.	While initializing the film annotation characters file, an error has been sent back by the component for creating film annotation character bitmap.	Correct the inappropriately set content of the FilmStrFmt.env file.
92D7	There is the miss-setting in the setup of registry for film strings format.	Necessary values have not been specified or invalid values have been specified for setup of the film annotation characters registry.	Check if registry setup is correct for film annotation characters.
92D8	Warning status was sent back from DICOM printer. (BFS N-CREATE)	The DICOM printer sent back a warning.	Check if values set for the DICOMPrint.env file for configuration management are supported by the DICOM printer.
92D9	Program error was occurred because of the failure in the drawing the scale.	A program error occurred while drawing the scale.	Contact SE.
92DA	Error was occurred by the one of following reason, there is no connection establishment with DICOM printer, there is no responce from the DICOM printer or the request was rejected by the DICOM printer.	A failure resulted in connection established with the DICOM printer.	Check if the DICOM printer has been started up or has been established.
92DB	Error was sent back from DICOM printer. (BFB N-ACTION)	The DICOM printer sent back an error.	Restart the system or the DICOM printer to perform the operation under the same conditions again.
92DC	Warning status was sent back from DICOM printer. (BFB N-CREATE)	The DICOM printer sent back an error.	Check if values set for the DICOMPrint.env file for configuration management are supported by the DICOM printer.
92DD	Warning was sent back from DICOM printer. (BIB N-SET)	The DICOM printer sent back a warning.	Check if values set for the DICOMPrint.env file for configuration management are supported by the DICOM printer.
92DE	Program error was occurred because of the failure in the setup parameters with shutter processing.	An error occurred while setting parameters for blackening process necessary for image input. It is possible that image information or configuration management fill parameter is illegal.	Contact SE.
92DF	Internal error was occurred. (Failer for reset of timedout event with the incoming FCR image data.)	Program error during timer processing (bug).	Contact SE.

Message No.	Error Message	Conditions and Causes of Error	Remedies
92E0	Internal error was occurred. (Failer for setup of timedout event with the incoming FCR image data.)	Program error during timer processing (bug).	Contact SE.
92E1	Internal error was occurred. (Failer for check of timedout event with the incoming FCR image data.)	Program error during timer processing (bug).	Contact SE.
92E2	Internal error was occurred. (Failer for create of timedout event with the incoming FCR image data.)	Program error during timer processing (bug).	Contact SE.
92E3	Internal error was occurred. (Failer for release of timedout event with the incoming FCR image data.)	Program error during timer processing (bug).	Contact SE.
92E4	Internal error was occurred. (Exception error on timedout event with the incoming FCR image data.)	Program error during timer processing (bug).	Contact SE.
9F01	Error: Application software detected the invalid value in the queue file type.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9F02	Error: Application software cannot open the queue file.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9F04	Error: Application software cannot map the queue file correctly.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9F05	Error: Application software cannot create the view of queue file.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9F07	Error: Application software cannot discard the view of queue file.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9F08	Error: Application software cannot reset the mapping of queue file.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9F09	Error: Application software cannot close the queue file.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9F0A	Error: Application software detected the invalid checksum queue in the queue file.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9F0B	Application software detected the invalid size of queue file.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9F0C	Error: Application software cannot modify the queue file.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9F0D	Error: Application software cannot continue the process due to the invalid value of the data to set in the image output queue.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.
9F0D	Error: Application software cannot get the size of queue file.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart This Equipment. (2) Initialize the database. (3) Contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
A001	Error: Application software detected the exception of memory shortage.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is larger than the actual memory size. If the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters. (4) Service headquarters will expand the memory capacity if it is not sufficient. If sufficient, headquarters will request the design section for analysis.
A002	Error: Application software detected the error to call the subsystem message.	An error occurred while sending/receiving messages between sub-systems (program error).	Contact service headquarters.
A1F5	Error: Application software detected the time-out in the process to create the subsystem.	Failed in starting up necessary sub-systems for any reason.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EiflmgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
A1F6	Error: Application software cannot create the subsystem process.	Failed in starting up necessary sub-systems for any reason.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EiflmgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
A1F8	Error: Application software detected exemption.	Failed in accessing such resources as files and memories.	(1) Restart the equipment. (2) Contact service headquarters.
A1F9	Error: Application software detected memory exception.	Failed in accessing the memory.	(1) Restart This Equipment. (2) Contact service headquarters.
A1FA	Error: Application software detected the error in other subsystem.	An error occurred while sending/receiving messages between subsystems.	Contact service headquarters.
A1FB	Error: Application software detected the error in the socket initialize process.	An error occurred during initialization for message transmission/reception between subsystems (program error).	Contact service headquarters.
A1FC	Error: Application software detected the timeout in the subsystem termination.	A timeout resulted while sending/receiving messages between subsystems (program error).	Contact service headquarters.
B001	Error: Application software cannot get the memory.	Failed in accessing memory.	(1) Restart This Equipment. (2) Contact service headquarters.
B002	Error: Application software detected the exemption of file management.	Failed in accessing the file.	(1) Restart This Equipment. (2) Contact service headquarters.
B003	Error: Application software detected the exemption.	Failed in accessing the resource such as file, memory, etc.	(1) Restart This Equipment. (2) Contact service headquarters.
B004	Error: Application software detected the low level exemption.	Failed in accessing the resource such as file, memory, etc.	(1) Restart This Equipment. (2) Contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
B065	Error: Application software detected the exemption of memory management.	Failed in accessing the memory.	(1) Restart This Equipment. (2) Contact service headquarters.
B066	Error: Application software cannot continue the process due to the lack of memory.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters.
B067	Error: Application software detected the error during creating the event.	Program error.	Contact service headquarters.
B0C9	Error occurred in the image file read/write process due to distruct the image file.	(1) The image file is damaged. (2) The disk is damaged. (3) Data file format is invalid.	(1) Recapture the image data if it can be re-input. (2) Check that the disk is not damaged.
B0CA	Error occurred in the image file read/write process, there is no image file.	(1) Only the image file was deleted. (2) The disk is damaged. (3) The image data file does not match the database.	(1) Restructure the database for making it match the image data file. (2) If error recurs, initialize the database. (Be careful not to delete the image data.) (3) If error recurs, check the disk.
B12E	Error: Received image data is not correct.	(1) The image file is damaged. (2) The disk is damaged. (3) Data file format is invalid.	(1) Recapture the image data if it can be re-input. (2) Check that the disk is not damaged.
B12F	Error: Image data to send is not correct.	(1) The image file is damaged. (2) The disk is damaged. (3) Data file format is invalid.	(1) Clear the queue off to retry image output. (2) Check that the disk is not damaged.
B130	Error: Image information data of received image is invalid.	Part of the image information for input does not match the protocol specifications.	Contact service headquarters.
B131	Error: Image information data to send is invalid.	Part of the image information for output does not match the protocol specifications.	Contact service headquarters.
B132	Error: Application software cannot open the image data file.	(1) The image file is damaged. (2) The disk is damaged. (3) Data file format is invalid.	(1) Recapture the image data if it can be re-input. (2) Check that the disk is not damaged.
B133	Error: Application software cannot map the image data on the memory.	(1) Memory cannot be obtained. (2) The OS is defective. (3) The application software is defective.	(1) Restart the system to retry image data mapping. (2) Contact service headquarters if error recurs.
B134	Error: Application software cannot create the image data file.	(1) No area available on the disk because other partitions use it. (2) The disk is damaged. (3) The application software is defective.	(1) Check to see that other application software does not use partitions on the same disk. (2) Restart the system to retry image data creation. (3) Contact service headquarters if error recurs.
B135	Error: Application software cannot map the image data on the disk.	(1) Memory cannot be obtained. (2) No empty area is available on the disk. (3) The OS is defective. (4) The application software is defective.	(1) Check to see that other application software does not use partitions on the same disk. (2) Restart the system to retry image data mapping. (3) Contact service headquarters if error recurs.
B136	Error: Application software cannot display the image due to the lack of pixel related information.	Pixel-related data contained in the image information is invalid.	Contact service headquarters.
B137	Error: Specified memory does not managed in the memory management process.	Program error.	Contact service headquarters.

Message No.	Error Message	Conditions and Causes of Error	Remedies
B138	Error: Application software detected the error in the data decompression.	An error occurred while decompressing the image data. (1) The image file received is damaged. (2) The disk is damaged. (3) Data compression program error occurring in the transmission device. (4) Data decompression program error.	(1) Check the disk. (2) Contact service headquarters.
B191	Error: Application software cannot create the image processing subsystem.	Failed in starting the sub-system.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EifImgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
B192	Error: The image processing subsystem is already created.	The application software has been started without restarting the equipment after the operation was suspended due to abnormal processing.	Restart This Equipment.
B1F5	Error: Application software detected invalid value in the image processing parameter.	The parameter value is outside the range.	(1) Resend the image data if it is possible to do so from the equipment that has sent the image data. (2) Contact service headquarters.
B1F6	Error: Application software detected invalid value in the image processing look up talbe.	The parameter value is outside the range.	(1) Resend the image data if it is possible to do so from the equipment that has sent the image data. (2) Contact service headquarters.
B259	Error: Application software detected the error in the process to create the image processing thread.	Program error.	Contact service headquarters.
B2BD	Error: Application software cannot create the OCX.	Program error.	Contact service headquarters.
B321	Error: Application software detected the error in the image processing board.	Error sent back from the image processing board.	Send the Event Viewer system and the application software logs back to service headquarters.
B323	Unexpected volume of image memory are detected on the image processing board. Following process will be continued by assuming that the 32MB image memory is installed.	The self-diagnosis function detected invalid settings in the image processing board.	Check settings of the image processing board.
B7CE	Error: Application software detected the error in it's internal process.	Program error.	Contact service headquarters.
C001	Not permitted to access.	Database cannot be rewritten because the access right to do so has not been permitted. This failure will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If still not possible, contact service headquarters.
C002	Failed to get the handle.	Failed in acquiring handles such as file, memory, window, etc. for any reasons. This error basically will never occur.	(1) Initialize Windows status by restarting the system and then subject it again to processing. (2) Contact service headquarters if (1) above is not possible.
C003	Failed to map.	Failed in operating file or memory (memory mapping process). This error basically will never occur.	(1) Initialize Windows status by restarting the system and then subject it again to processing. (2) Contact service headquarters if (1) above is not possible.

Message No.	Error Message	Conditions and Causes of Error	Remedies
C004	Invalid parameter.	Parameter values specified in database are not correct (program error).	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If still not possible, contact service headquarters.
C005	Invalid value.	Parameter values specified in database are not correct (program error).	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If still not possible, contact service headquarters.
C006	Cannot open the database.	Failed in accessing the database file.	(1) Restructure the database. (2) If it does not improve, initially install the application software.
C008	Cannot modify the database.	Failed in accessing the database file.	(1) Restructure the database. (2) If it does not improve, initially install the application software.
C009	Cannot find the image.	Database does not match the image file.	(1) Restructure database. (2) Initialize database if condition does not improve.
C00A	Cannot query to the database again.	There is a mismatch between the database and the image file.	(1) Restructure the database. (2) If it does not improve, initialize the database.
C00B	Not permitted to access.	Parameters for acquisition of the access right to database are invalid (program error).	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If still not possible, contact service headquarters.
C00D	Database is invalid.	The database file is damaged.	(1) Restructure database. (2) Initially install the application software if condition does not improve.
C00E	Cannot get the memory.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters.
C00F	Cannot process the transaction.	Program error.	(1) Restructure the database. (2) If it does not improve, initialize the database.
C010	Multiple local image managing process are created.	The application software has been started without restarting the equipment after the operation was suspended due to abnormal processing.	Restart This Equipment.
C011	Failed to initialize the socket interface.		
C012	Exemption occurred.	Failed in accessing the resource such as file, memory, etc.	(1) Restart This Equipment. (2) Contact service headquarters.
C013	Failed to re-built the database.	(1) The image information file format is not the same. (2) Some of the image information files are damaged.	Initialize database.
C014	No space in the local hard disk.		(1) Delete unnecessary images. (2) Increase the disk capacity. (3) Contact service headquarters if this alert appears even though FIFO has been specified.
C015	Failed to rebuild the database.	(1) The image information file format is not the same. (2) Some of the image information files are damaged.	Initialize the database.

Message No.	Error Message	Conditions and Causes of Error	Remedies
C016	Application software detected the time-out when it is waiting for the other process to be created.	Other sub-systems could not be started.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EifImgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
C017	Invalid image.	The image data cannot be registered to the database due to invalid data contained in the image information.	Contact service headquarters.
D001	Error: Application software cannot open the file.	Failed in opening the set file. (1) No necessary file available. (2) Image data cannot be read due to invalid file format. (3) File values cannot be read because | they are invalid.	(1) If the invid file has been detected, correct it. (2) If it has not been detected, re-install the application software.
D002	Error: Application software detected the overflow in the table.	The number of files exceeding the limit has been registered.	Manually check to see that the number of files set does not exceed the limit. If this failure does not improve, newly install the system to initialize the set file.
D003	Error: Application software detected the invalid parameter name.	An invalid parameter name has been specified to the set file. This error will never occur when setting the value using the Field Tool.	(1) Check settings using the Field Tool. (2) If there is a file rewritten using the Text Editor, check the file. (3) If no abnormality is found, newly install the application software.
D004	Error: Application software detected the invalid parameter value.	An invalid value (outside the range) has been set for the set file. This error will never occur when setting the value using the Field Tool.	(1) Check settings using the Field Tool. (2) If there is a file rewritten using the Text Editor, check the file. (3) If no abnormality is found, newly install the application software.
D005	Error: Application software detected the invalid key word.	An invalid keyword (to identify the set information) has been set for the set file. This error will never occur when setting the keyword using the Field Tool.	(1) Check settings using the Field Tool. (2) If there is a file rewritten using the Text Editor, check the file. (3) If no abnormality is found, newly install the application software.
D006	Error: Application software cannot get the parameter.	Failed in obtaining parameter values from the set file. This failure will basically never occur.	
D008	Error: Application software cannot map the data on the memory mapped file.	Failed in accessing the set file. This failure will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) Contact service headquarters.
D009	Error: Application software cannot set the entry to the memory mapped file.	Failed in accessing the setting file. This failure will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) Contact service headquarters.
D00A	Error: Application software cannot set the entry to the memory mapped file.	Failed in accessing the set file. This failure will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) Contact service headquarters.
D00C	Error: Application software detected the exemption in the file i/o process.	Failed in accessing the set file. This failure will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If failure recurs, newly install the application software. (3) Contact service headquarters.
D00D	Error: Application software detected the exception in the HICONFIG termination process.	Failed in initializing the configuration management subsystem for any reason. This failure will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If failure recurs, newly install the application software.

Message No.	Error Message	Conditions and Causes of Error	Remedies
D00E	Error: Application software detected the exemption in the HICONFIG initialization process.	Failed in initializing the configuration management sub-system for any reason. This failure will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If failure recurs, newly install the application software. (3) Contact service headquarters.
D00F	Error: Application software detected the exemption in the SET function.	An error occurred when storing the set information. This error will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If failure recurs, newly install the application software. (3) Contact service headquarters.
D010	Error: Application software detected the exemption in the GET function.	An error occurred when acquiring the set information. This error will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If failure recurs, newly install the application software. (3) Contact service headquarters.
D011	Error: Application software detected the exemption in the IS function.	An error occurred in the program for verifying the set information. This error will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If error recurs, newly install the application software. (3) Contact service headquarters.
D012	Error: Application software cannot find valid data.	Processing cannot be continued because there are no data available for the set file.	(1) Check settings using the Field Tool. (2) If there is a file rewritten using the Text Editor, check the file. (3) If no abnormality is found, newly install the application software.
D013	Error: Application software detected the error in the file read process.	Failed in accessing the set file. This error will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If error recurs, newly install the application software. (3) Contact service headquarters.
D014	Error: Application software detected the error in the file write process.	Failed in accessing the setting file. This failure will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If failure recurs, newly install the application software. (3) Contact service headquarters.
D015	Error: Application software cannot get the directory to the application.	Image data registered to the registry is invalid.	Newly install the application software.
D016	Error: Application software cannot move the current directory.	An error occurred when moving the work directory for internally controlling it. Directory configuration can be assumed to be different from that expected.	Newly install the application software.
D017	Error: Application software cannot un-map the view.	Failed in accessing the setting file. This failure will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If failure recurs, newly install the application software. (3) Contact service headquarters.
D018	Error: Application software cannot un-map the view.	Failed in accessing the setting file. This failure will basically never occur.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) If failure recurs, newly install the application software. (3) Contact service headquarters.
D019	Error: Application software cannot get the data from registry.	(1) Information required for the registry has not been registered. (2) An error occurred when acquiring the registry information.	(1) Restart the system for retrial. (2) If error recurs, newly install the application software.
D01B	There is the illegal format.	An illegal format has been described in the Env file.	Check Env file description format (delimiter, etc.).
D01C	There is the illegal AE-title.	An illegal AE has been described in the Env file.	Check that the AE name does not exceed 17 characters or "( )(")(,)(;)(:)(=) and (\b)" are not used.
D01D	It should be set by 4 digit hex number for the warning code.	An illegal Warning Code has been described in the Env file.	Check that the Warning Code is a hexadecimal 4-digit number.

Message No.	Error Message	Conditions and Causes of Error	Remedies
D01E	It should be set less than 16 with the number of warning code.	An illegal Warning Code has been described in the Env file.	Check that 17 or more Warning Codes have not been specified.
D01F	There is unexpected EOF.	No delimiters have been described in the Env file.	Check that the delimiter comes before the end of the file.
D020	There is no mandatory information (REQ_IMG_10BITS_STORED).	No mandatory information has been specified in the Env file.	Check that the mandatory information has been specified in the Env file.
D021	The internal program error was occurred.	This program error must not occur. If occurs, it is a bug.	Contact SE.
D022	The number of identifier or value is exceeded maximum number of limitation.	Identifiers or values exceeding the allowable numbers have been specified in the Env file.	Check that 11 sets of more have not been specified.
D023	Exceptional error was occurred in the mapping file process.	An unexpected error occurred during file mapping process.	Contact SE.
D024	There is the illegal BIN number.	An illegal BIN number has been specified in the Env file.	Check that the BIN has been specified between 1 and 100.
D025	The number of collation value are exceeded the maximum number of limitation.	Collation values exceeding the number of limit have been described in the Env file.	Check that the number of values does not exceed 129.
D026	The AE-titles are duplicated.	A multiple number of AE names have been described in the Env file.	Check that a multiple number of the same AE names have not been specified.
D027	The value of size code is illegal.	Size codes exceeding the number of limit have been specified in the Env file.	Check that 30 sets or more of size codes have not been specified in the Env file.
D028	The requested image size is illegal.	An illegal image size has been requested in the Env file.	Check that the requested image size is within the range of 0.1 and 9999.9. Also describe one place of decimals.
D029	The ratio for magification is illegal.	An illegal image magnification ratio has been described in the Env file.	Check that the magnification ratio has been specified between 1 and 999.
D02A	The film pattern is illegal.	An illegal film pattern has been described in the Env file.	Check that a correct film pattern has been specified in the Env file.
D02B	The combination with requested image size, film magnification ratio, film format are illegal.	An illegal combination has been specified in the Env file.	Check that the requested image size and the film image magnification ratio have been specified as a pair at the same time.
D02C	The number of size code is exceeded the maximum number of limitation.	Size codes exceeding the number of limit have been specified in the Env file.	Check that 30 sets or more of size codes have not been specified in the Env file.
D02D	The number of the combination with film size, film orientation and film format are exceeded the maximum number of limitation.	The number of combinations exceeding the limit has been described in the Env file.	Check that 65 sets or more of combinations have not been specified in the Env file.
D02E	The default information is duplicated.	A multiple number of pieces of default information have been described in the Env file.	Check that a multiple number of pieces of the same default information have not been specified.
D02F	There is the illegal collation value.	An illegal collation value has been described in the Env file.	Check that the number of the collation value does not exceed 65 characters.
D030	The number of AE setup information are exceeded the maximum number of limitation.	The number of AE names exceeding the limit has been specified in the Env file.	Check that 801 or more of AE names have not been specified in the Env file.
D031	It is specified illegal fill parameters for shutter processing.	The fill parameter setup file has been damaged or it is a bug.	Copy the PNTPRM.PRM or PNTUMN.PRM file from the CD-ROM onto the installation directory and deselect reading attributes.
D032	Error: Memory exception is occurred.	An unexpected error occurred while operating memory.	Contact SE.
D033	It is failed to initialize system management process.	The system is unstable or it is a bug.	Contact SE.

Message No.	Error Message	Conditions and Causes of Error	Remedies
D034	It is failed to lock image in the system management process.	The system is unstable or it is a bug.	Contact SE.
D035	Program error is occurred. It is specified illegal flag.	Bug.	Contact SE.
D036	Program error is occurred. Illegal access to edit information is occurred.	Bug.	Contact SE.
D037	It is failed to unlock image in the system management process.	The system is unstable or it is a bug.	Contact SE.
D1F5	Application software cannot continue the process due to the memory shortage.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters.
D1F6	Application software received the error from configuration management subsystem.	An error occurred in the configuration management sub-system that controls the set information.	(1) See error message of the configuration management sub-system. (2) Contact service headquarters if the configuration management sub-system has not indicated an error.
D1F7	Application software received the error from Windows API or member in the class library.	Error detected during the self-check. WinAPI/exceptional error.	(1) Restart the system to initialize Windows and then repeat the same processing. (2) Contact service headquarters.
D1F8	Application software cannot create the database subsystem.	Failed in starting the database sub-system for some reason.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EiflmgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
D1F9	Initialization or re-build process is failed.	Database not correctly set or database file damaged.	(1) Check that ODBC has been correctly installed. Open [Control Panel] and then [ODBC] to check to see that This Equipment has been registered. (2) If ODBC has been correctly installed, newly install the application software for initializing the database file.
D1FA	Application software received the error from common class library.	Internal interface error (program error).	Contact service headquarters.
D1FB	Application software detected the invalid parameter value.	An invalid parameter value has been set.	Correct the parameter value.
D259	Key in data is invalid. Please try again.	The input value is not correct.	Input correct value.
D25A	IP address is duplicated.	An attempt was made to register the same IP address that has already been registered.	Register another IP address.
D25B	Host Name is duplicated.	An attempt was made to register the same host name that has already been registered.	Change the host name.
D25C	There no such node name having specified property.	No target hosts for search registered.	Register hosts to be searched for and check properties.
D25D	Specified AE titles are duplicating.	An attempt was made to register the same AE name that has already been registered.	Register another AE name.

Message No.	Error Message	Conditions and Causes of Error	Remedies
D25E	Specified service classes are duplicating.	An attempt was made to register the same service class that has already been registered.	
D25F	The number of definition is exceeded the maximum limitation.	The number of definitions exceeds the limit, resulting in disabling settings.	Delete unnecessary settings.
D261	One of these Data starting point within composited data should be 1.	Wrong settings.	Reset as the message instructs.
E064	Error: Application software detected the error in error process.	An error occurred when accessing the error registration file (program error).	Contact service headquarters.
E065	Error: Application software failed to initialize the error log file.	An error occurred when accessing the error registration file (program error).	Contact service headquarters.
E066	Error: Application software cannot read/write the error log file.	An error occurred when accessing the error registration file (program error).	Contact service headquarters.
E067	Error: The entries to the error log file exceeded it's maximum limit.	An error occurred when accessing the error registration file (program error).	Contact service headquarters.
E068	Error: Application software cannot get the error log file name.	An error occurred when accessing the error registration file (program error).	Contact service headquarters.
E0C8	Error: Application software cannot continue the process due to the lack of memory.	(1) The memory capacity available exceeded the limit. (2) The virtual memory capacity has been set incorrectly. (3) Application software error causes memory not to be free, resulting in insufficient memory capacity.	(1) Select [Control Panel], [System] and then [Performance] to make sure that the virtual memory capacity is smaller than the actual memory size, change the former. (2) Restart the application software to make the memory free. (3) If error recurs, contact service headquarters.
E0C9	Error: Application software detected the error in the pipe i/o.	The sub-system has terminated abnormally.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EiflmgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
E0CA	Error: Application software detected the time-out to connect the pipe.	The sub-system has terminated abnormally.	(1) If this failure occurs when starting the sub-system, start [Control Panel] and [Devices] and then check to see that the E-i/f (EiflmgX, SmcuX) and the image processing board (Qpi) driver have been set to "Start" (only for installed boards). If they have not been started, it is possible that the driver has failed in acquiring resources. It is also possible that a resource setting conflict occurs with respect to other devices. (2) Contact service headquarters informing them of the result of (1) above.
E0CB	Error: Application software cannot read the image file.	While operating the file, an error occurred for any reason (program error).	Contact service headquarters.
E0CC	Error: Application software cannot open the image file.	While operating the file, an error occurred for any reason (program error).	Contact service headquarters.
E0CD	Error: Application software cannot find any valid data in the configuration file.	The raw data table of the image processing parameter has not been registered.	(1) Check the file that stores the raw data table of the image processing parameter. (2) If this failure does not improve, newly install the system.

Message No.	Error Message	Conditions and Causes of Error	Remedies
E0CE	Error: Application software cannot open the variable length data file.	(1) The image information file format is not the same. (2) Some of the image information files are damaged.	Initialize database.
E0CF	Error: Application software cannot map the file.	(1) The image information file format is not the same. (2) Some of the image information files are damaged.	Initialize database.
E0D0	Error: Application software cannot load the variable length data file.	(1) The image information file format is not the same. (2) Some of the image information files are damaged.	Initialize database.
E0D1	Error: Application software cannot write the variable length data file.	(1) The image information file format is not the same. (2) Some of the image information files are damaged.	Initialize database.
E0D2	Error: Program error. (Application software cannot get area enough for copying the image information.)	Program error.	Contacts service headquarters.
E0D3	Error: Application software cannot calculate the SC value.	The image processing parameter SC (sensitivity shift) information is invalid (program error) or failure in the image data transmission device can be assumed.	Contacts service headquarters.
E0D4	Error: Application software cannot open the registry file.	Failed in accessing the registry (program error).	Contacts service headquarters.
E0D5	Error: Application software detected the error in and out to the registry.	Failed in accessing the registry (program error).	Contacts service headquarters.
E0D6	Error: Application software cannot find valid image information data in the database.	Necessary image information is not available (program error) or failure in the image data transmission device can be assumed.	Contacts service headquarters.
E0D8	Error: Application software cannot convert the body part data correctly.	The body part menu code information received is invalid.	Contacts service headquarters.
E0D9	Error: Application software cannot find the data (0029, 2F30).	The image size code received is invalid.	Contacts service headquarters.
E0DA	Error: Application software cannot find the invalid data in (50F1, 2F10).	The film output format information of the image data received is invalid (program error).	Contacts service headquarters.
E0DB	Error: Application software cannot find the data (50F1, 2F10).	The film output format information of the image data received is invalid (program error).	Contacts service headquarters.
E0DC	The size code is invalid.	The size code information of the image received is invalid.	Contact service headquarters.
E0DD	It was failure to get the pixel density code that related size code.	The image size code received is invalid.	Contact service headquarters.
E0DE	It was failure to get the value of pixels and lines that related size code.	The image size code received is invalid.	Contact service headquarters.
E0DF	It was failure to get the value of pixel density code that related size code.	The image size code received is invalid.	Contact service headquarters.

FCR DMS

QA-WS771 Service Manual

INSTALLATION

Control Sheet

Date of issue	Revision No.	Reason	Applicable pages
2/10/1999	00	New release (FM2420)	All pages
5/20/1999	01	Corrections and additions (Print Service Function) for 2nd edition (FM2448)	00, 0.1-0.4, 53, 76, 77, 95-170
12/20/2000	03	Corrections and additions for software upgrade to ver. A03, A04 and Precision 420, together with other corrections (FM2908)	0, 00, 0.1-0.6, 38, 41-63, 64-85, 87, 90, 93, 96, 98, 100, 101, 107, 135, 136, 147, 161, 171, 200
12/20/2000	03	Changes in pagination (FM2908)	86, 88, 89, 91, 92, 94, 95, 97, 99, 102-106, 108-111, 112-134, 137-146, 148-160, 162-170, 172-199
7/10/2001	04	Corrections and additions for software upgrade to ver. A05 and Precision 330, together with other corrections (FM3067)	0, 00, 1, 6, 7, 39, 40, 42, 43, 64, 65, 98, 100, 101, 103, 104, 140-142, 156
7/10/2001	04	Changes in pagination (FM3067)	102, 105-139, 143-155, 157-202
1/20/2002	05	Corrections and additions due to adoption of Precision 530, together with other corrections (FM3270)	0, 00, 1, 5-7, 61, 85, 90, 107, 131, 140, 143-149
9/10/2002	06	Revision for software version A06 and SL-IC300 (FM3446)	0, 00, 5-7, 40
12/20/2002	07	Revision for software version A07 and Windows XP (FM3623)	0, 00, 1, 5
06/20/2003	08	Corrections and additions due to adoption of Precision 450 and SL-IC200 (FM3987)	0, 00, 1, 3, 4, 6-7.2, 10, 40
11/20/2003	09	Corrections (FM4117)	0, 00, 40

1. Installing Conditions

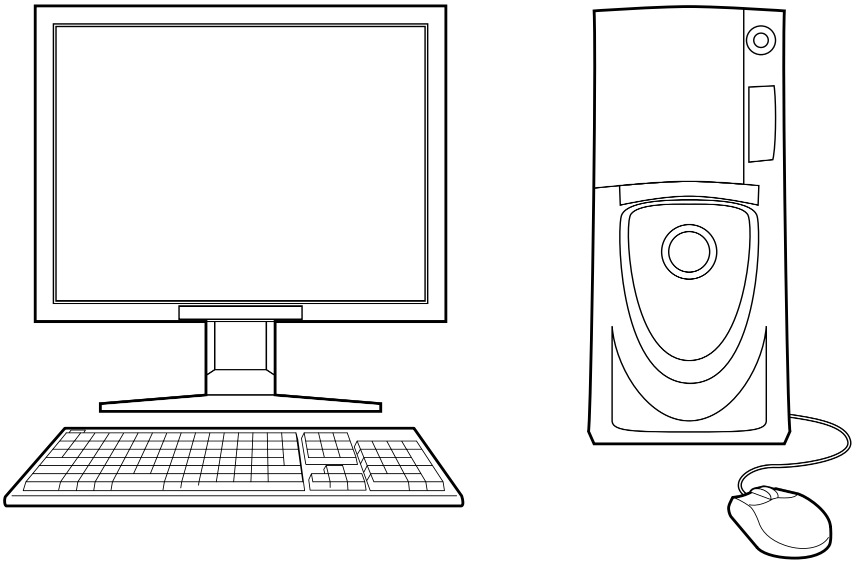
1.1 Dimensions and Weight

Unit	Width (mm)	Depth (mm)	Height (mm)	Weight (kg)
Control unit	222	453	491	16.0 or more
21" monitor*	449	209	446 – 528	10.5
Keyboard	460	170	50	1.2

* : Dimensions and weight for the 2MLCD type monitor (SL-IC200).
The height is changeable within the range shown.

1.2 System Configuration and Connection

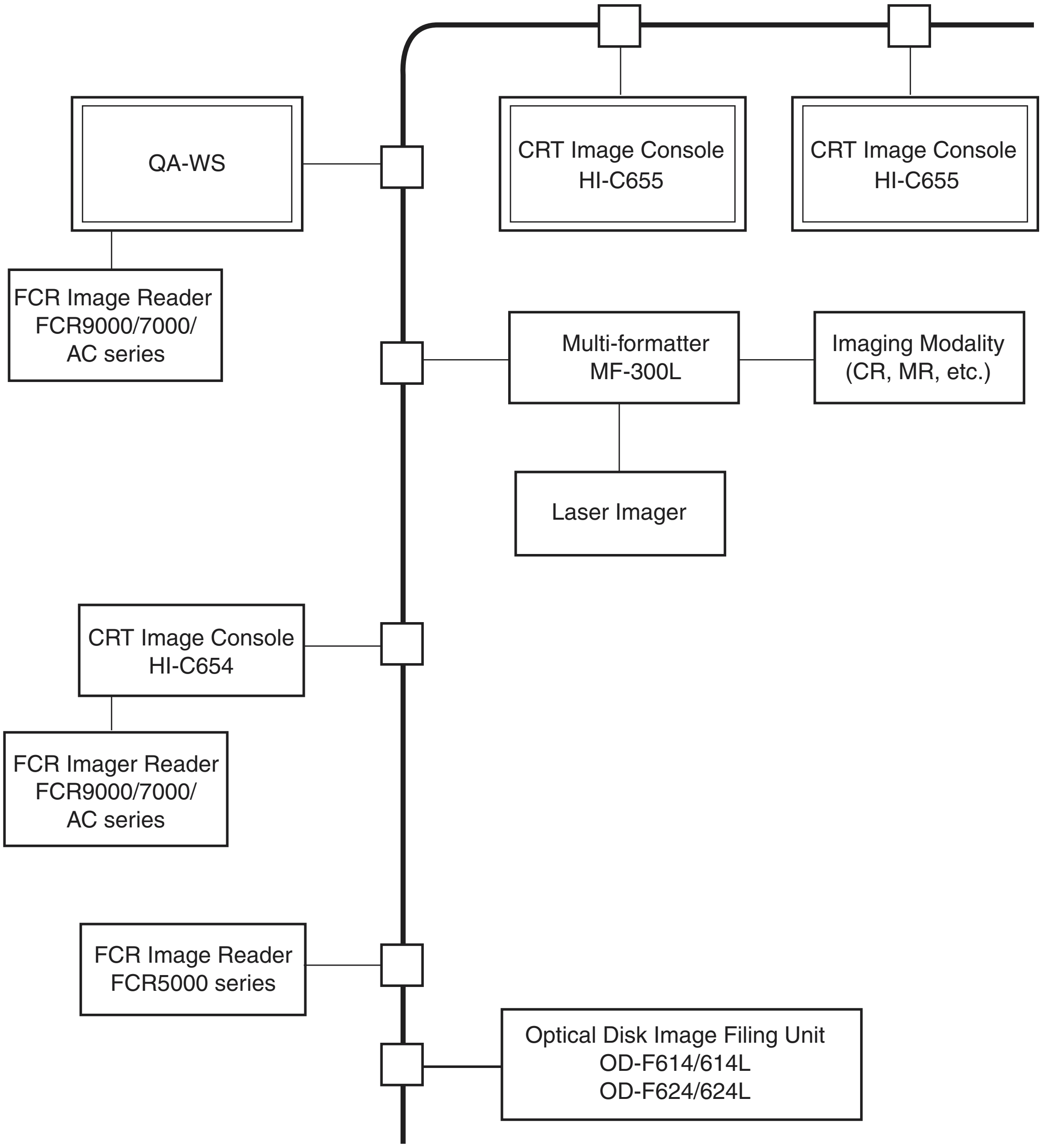
■ System Configuration



Unit	Item	Remarks
Control unit	CPU	PentiumII, clock frequency of above 400 MHz
	Main memory	256MB or more
	Internal HDD	9GB or more
	Ethernet board	10BASE-T/100BASE-TX
	OS	Windows NT Workstation4.0 or Windows XP Professional
Monitor	21" monitor	21" grayscale monitor (1600 × 1200)
Keyboard	Keyboard	
Mouse	Mouse	

■ Example of Connection

The following diagram shows an example of system connection.


QA-WS
CRT Image Console
HI-C655
CRT Image Console
HI-C655
FCR Image Reader
FCR9000/7000/
AC series
Multi-formatter
MF-300L
Imaging Modality
(CR, MR, etc.)
Laser Imager
CRT Image Console
HI-C654
FCR Imager Reader
FCR9000/7000/
AC series
FCR Image Reader
FCR5000 series
Optical Disk Image Filing Unit
OD-F614/614L
OD-F624/624L

FCR9000 series:	9000, 9501, 9502
FCR7000 series:	7000, 7000M, 7501, 7501S
FCR5000 series:	5000, 5000R
FCR AC series:	AC-1 PLUS, AC-2, AC-3

1.3 Temperature and Humidity

Unit	Condition	Temperature	Humidity
Control unit	During operation	10°C ~ 35°C	20% ~ 80%RH (With no dew condensation)
	While idling	-40°C ~ 65°C	20% ~ 80%RH (With no dew condensation)
21" monitor	During operation	0°C ~ 40°C	20% ~ 80%RH (With no dew condensation)
	While idling	-20°C ~ 60°C	20% ~ 90%RH (With no dew condensation)

1.4 Power Supply Conditions

Unit	Power voltage/capacity	Remarks
Control unit	90 ~ 265VAC / Approx.0.3KVA	Supplied from 115 or 230VAC receptacle.
21" monitor	90 ~ 265VAC / Approx. 0.15KVA	Supplied from 115 or 230VAC receptacle.

Phase .... Single phase
Frequency .... 50/60 Hz
Grounding resistance......... 100Ω or less

1.5 Environmental Conditions

Avoid installing the unit in the following places.

- Where temperature changes are extreme
- Near heating elements such as heaters
- Where water leakage may occur
- Where the unit may be exposed to corrosive gas
- Where it is very dusty, etc.
- Where the unit may be subject to constant extreme vibration and shock
- Where the unit may be exposed to direct sunlight

◆ ***NOTE*** ◆

In addition to the above places, avoid installing the 21" monitor in the following places.
- ● *In an enclosed space such as in a rack case*
- ● *Where the CRT may be subject to direct sunlight*
- ● *Near AC magnetic fields above 0.02 Gauss such as transformers, monitors, or power lines*

1.6 Connecting to a Network

When connecting the unit to a network, prepare the appropriate network components and accessories and, if necessary, perform wiring works according to the specifications.

2. Equipment Installation and Setup

2.1 Tools Required

- Phillips screwdriver (+) No. 2

2.2 Uncrating

◆ NOTE ◆

Be sure to observe the following when unloading, uncrating, or carrying the equipment.

● *Shock and/or vibration*
When unloading or transferring the equipment, be careful not to subject it to excessive shock and/or vibration, which may result in damage or malfunction.

● *Sudden temperature changes*
Sudden temperature changes while the equipment is uncrated or being transferred may cause dew condensation inside each system component unit.
Turning the equipment ON with condensation inside will result in equipment failure.
Be sure to turn the power ON only after letting the equipment stand for an hour or more.

● *21" monitor (for the CRT)*
Move the 21" monitor carefully as its center of gravity is located on the CRT side. And since it weighs 29 kg, for safety reasons do not attempt to move it by one person. After uncrating the monitor, be careful not to scratch the CRT surface.

■ Control Unit

1. Open the crate.
2. Take out the packages that contain the accessories.
3. Remove the packing materials and take the control unit out of the package.

■ 21" Monitor

1. Open the crate and take the components out.
2. Remove the packing materials and take the 21" monitor out of the cardboard box.

2.3 Checking the System Components

■ Product Codes

(1) QA-WS basic configuration

- QA-WS 36G B∗ E

Unit	Items	Quantity	Remark
Control unit	Control main unit (HDD 18GB, Memory 256MB)	1	
	Keyboard	1	Included in the same package
	Mouse	1	Included in the same package
	AC cable (3-pin plug)	1	Included in the same package
	Full set of accessories	–	Included in the same package
	Video board	1	Preinstalled in the control main unit
21" monitor	21" monitor (MDM2130)	1	
	AC cable (3-pin plug)	1	Included in the same package
	Operation Manual	–	Included in the same package
	Video cable	1	Included in the same package
	Image processing board (QPI01A)*	1	Separately packed
Software	QA-WS application software (CD-ROM)	1	Included in the same package

(Internal components of the control unit are not listed up in this table.)

∗ The QPI01A image processing board is contained in the case of the 21" CRT. Install the QPI01A board in the PCI slot.

(2) QA-WS 3MLCD configuration

- QA-WS 36G SL-IC300 B∗ E

Unit	Items	Quantity	Remark
Control unit	Control main unit (HDD 18GB, Memory 256MB)	1	
	Keyboard	1	Included in the same package
	Mouse	1	Included in the same package
	AC cable (3-pin plug)	1	Included in the same package
	Full set of accessories	–	Included in the same package
	Video board	1	Preinstalled in the control main unit
Monochrome LCD monitor	Monochrome LCD monior (SL-IC300)	1	
	AC cable (3-pin plug)	1	Included in the same package
	Operation Manual	–	Included in the same package
	Video cable	1	Included in the same package
	Image processing board (QPI01A)*	1	Separately packed
Software	QA-WS application software (CD-ROM)	1	Included in the same package

(Internal components of the control unit are not listed up in this table.)

∗ The QPI01A image processing board is contained in the case of the monochrome LCD. Install the QPI01A board in the PCI slot.

(3) QA-WS 2MLCD configuration

- QA-WS 36G SL-IC200 A* #

Unit	Items	Quantity	Remark
Control unit	Control main unit (HDD 36GB, Memory 512MB)	1	
	Keyboard	1	Included in the same package
	Mouse	1	Included in the same package
	AC cable (3-pin plug)	1	Included in the same package
	Full set of accessories	–	Included in the same package
	Video board	1	Preinstalled in the control main unit
Monochrome LCD monitor	Monochrome LCD monior (SL-IC200)	1	
	AC cable (3-pin plug)	1	Included in the same package
	Operation Manual	–	Included in the same package
	Video cable	1	Included in the same package
	Image processing board (QPI01A)*	1	Separately packed
Software	QA-WS application software (CD-ROM)	1	Included in the same package

(Internal components of the control unit are not listed up in this table.)

* The QPI01A image processing board is contained in the case of the monochrome LCD. Install the QPI01A board in the PCI slot.

(4) QA-WS application software (CD-ROM)

- QA-WS MAIN SOFTWARE A** E

(5) FCR/DMS interface board for PCI bus

- E-I/F BD FOR PCI E

(6) Expansion system memory (128 MB) for HQ

- QA-WS AD MEM 128 MB E

(7) Image processing board

- IM PROCESS BD E

(8) Expansion image memory (64 MW) for image processing board

- HIC655 AD MEM 64M FOR IM BD E

2.4 Installing Boards

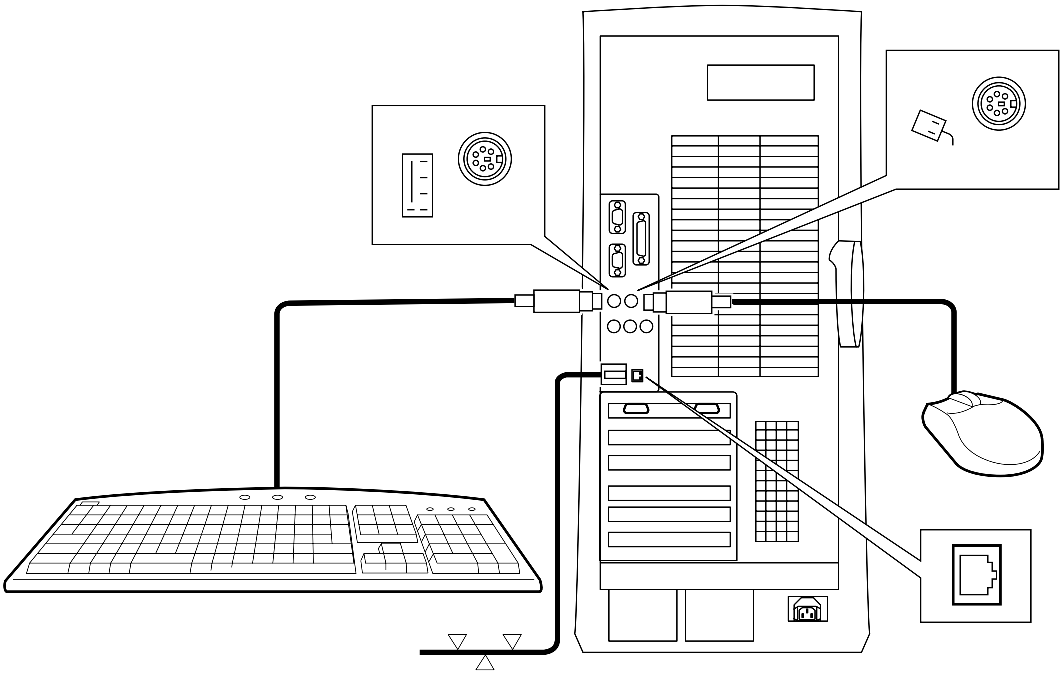
■ Installing Boards

For details on Installing the DXA PEI and video boards, refer to the following items in this manual.

- For all boards ⇒ “Maintenance 2. Internal Slots/Connectors of Control Unit”
  “Maintenance 6. Service Parts List”
- DXA board ⇒ “Installation 8.1 ■ DXA01A Board Setup”
- PEI board ⇒ “Installation 8.1 ■ PEI01A Board Setup”

2.5 Connecting Cables

(1) Connect the keyboard, mouse, and network cables at the back of the control unit.



◆ NOTE ◆

Connect the mouse connector and keyboard connector correctly to the specified ports.
If connected to the wrong ports, inputs will be disabled.

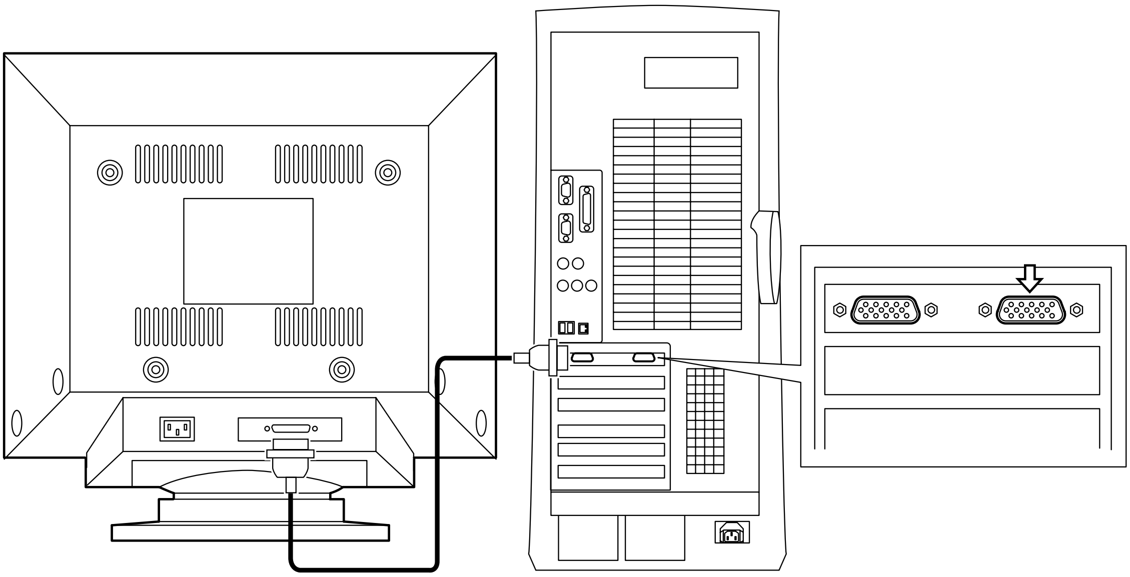
(2) Using the video cable, connect the 21" CRT monitor to the VIDEO port of the expansion at the back of the control unit slot.

☞ When the LCD (SL-IC300) is used, see the following.

→ "5. Connecting the LCD Panel to the PC Main Unit" in the "Super Resolution LCD Monitor SL-IC300 Service Manual"

☞ When the LCD (SL-IC200) is used, see the following.

→ The connection procedure described for the relevant board in the "LCD Monitor SL-IC200 Service Manual"



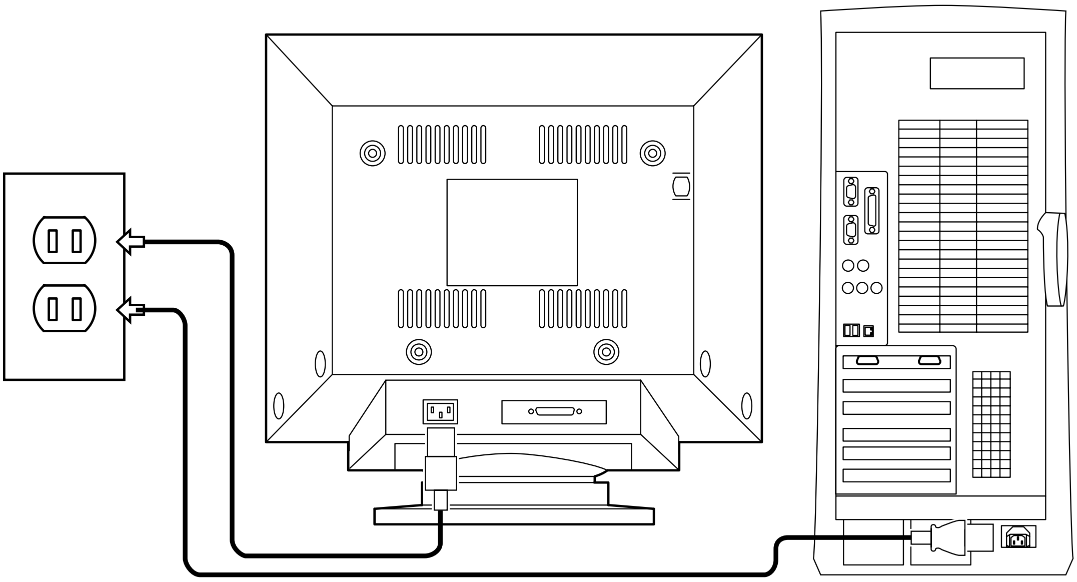
(3) Connect the control unit and CRT monitor to the AC power with AC cables. Because the voltage for both the control unit and the 21" CRT monitor is automatically adjusted (90 – 265VAC), no input voltage settings or changeover are required.

☞ When the LCD (SL-IC300) is used, see the following.

→ "5. Connecting the LCD Panel to the PC Main Unit" in the "Super Resolution LCD Monitor SL-IC300 Service Manual"

☞ When the LCD (SL-IC200) is used, see the following.

→ The connection procedure described for the relevant board in the "LCD Monitor SL-IC200 Service Manual"

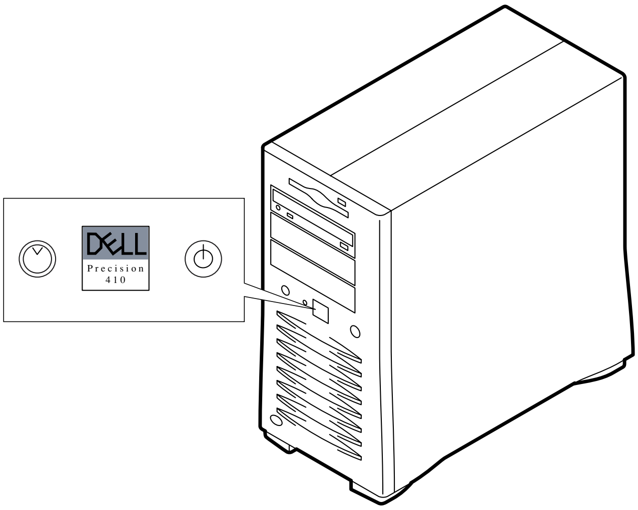


3. Starting Up

3.1 Turning ON the Equipment

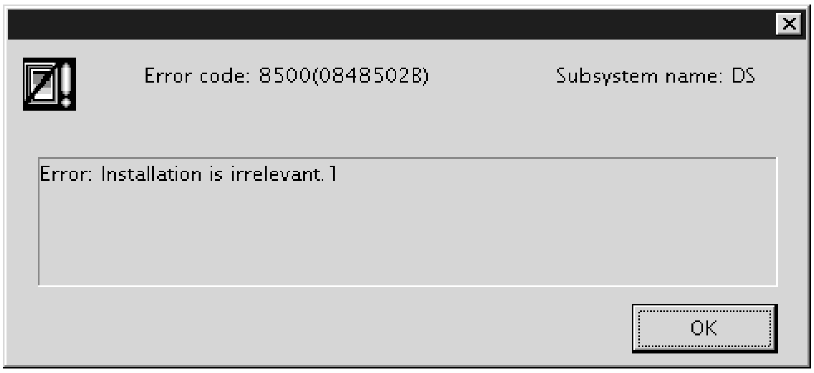
Turn ON the power in the following order.
21" CRT monitor → Control unit

(1) Turn ON the power switch in front of the 21" CRT monitor and then turn ON that of the control unit.



◆ NOTE ◆

The following error message appears as the key registry is not installed at installation.



Error code: 8500(0848502B) Subsystem name: DS

Error: Installation is irrelevant.1

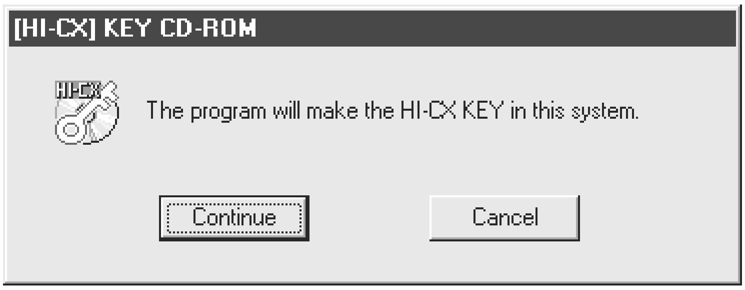
(2) Click [OK] to close the error message dialog box.

3.2 Installing the Key Registry

Perform the following procedure to create the key registry "encryption key" and enable use of QA-WS applications.

(1) Insert the CD-ROM storing the key registry into the CD-ROM drive.

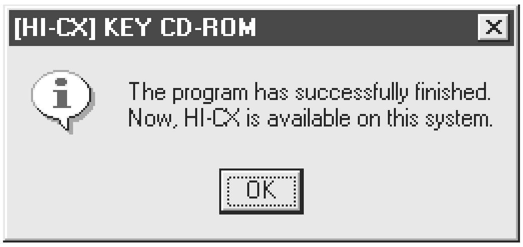
(2) The following start-up screen appears automatically.
Install the key registry and click [Continue] to enable use of the application.



[HI-CX] KEY CD-ROM

The program will make the HI-CX KEY in this system.

(3) The following dialog box appears.
Click [OK].



[HI-CX] KEY CD-ROM

The program has successfully finished.
Now, HI-CX is available on this system.

(4) Remove the CD-ROM from the CD-ROM drive.

3.3 Adjusting the Monitor

☞ When the LCD (SL-IC300) is used, see the following.

→ “8. Adjusting the LCD Panel Image Quality” in the “Super Resolution LCD Monitor SL-IC300 Service Manual”

☞ When the LCD (SL-IC200) is used, see the following.

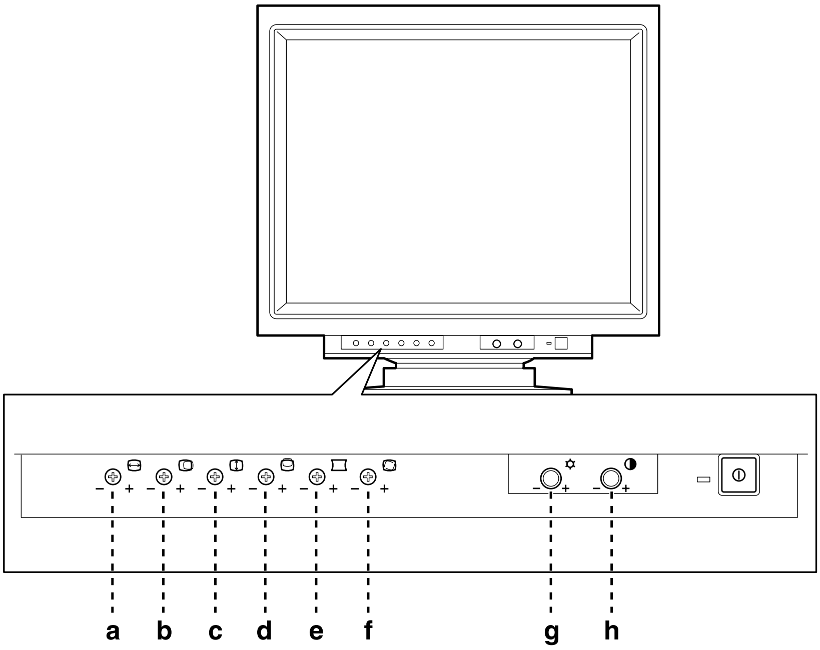
→ LCD Operation Manual

◆ NOTE ◆

If the menu does not appear even after some time (after the HDD access lamp has gone OFF completely), adjust the brightness and contrast appropriately using the adjustment functions available in front of the 21" CRT monitor.

* The functions of the adjustment knobs on the 21" CTR monitor are as follows.

No.	Adjustment		Effects
a	Horizontal size adjustment	Right	Enlarges
		Left	Reduces
b	Horizontal position adjustment	Right	Moves to the right
		Left	Moves to the left
c	Vertical size adjustment	Right	Enlarges
		Left	Reduces
d	Vertical positionadjustment	Right	Moves up
		Left	Moves down
e	Pin-cushion distortion adjustment	Right	Adjusts barrel distortion
		Left	Adjusts pin-cushionb distortion
f	Tilt correction	Right	Moves to the right
		Left	Moves to the left
g	Luminance adjustment	Right	Brighter
		Left	Darker
h	Contrast adjustment	Right	Stronger
		Left	Weaker



3.4 Checking the Picture Quality [Standards Currently Under Consideration]

This step can be skipped over unless particularly needed.

When checking the picture quality, display the test pattern for the following items.

- Resolution
- Luminance....... Requires a luminance gauge
- Artifact 1 .... Ringing, jitter, swimming, tailing
- Artifact 2 .... Inconsistency, flickering
- Chipping

Check	Reference Standards
Resolution	Compare with: [Limit sample CRT] Resolution should be [equivalent or above limit sample].
Luminance	Maximum luminance on CRT should be above [350] cd/m^2. The relative difference in difference between the four corners and center of the screen should be below [35]%.
Artifact (1)	There should be [no conspicuous artifact] on the whole CRT screen and at the edges of the chart 50 cm from the CRT.
Artifact (2)	There should be [no conspicuous artifact] on the whole CRT screen.
Chipping	There should be no chipping above [0.41] mm in a rectangular area of 254 mm x 343 mm at the center of the fluorescent face.

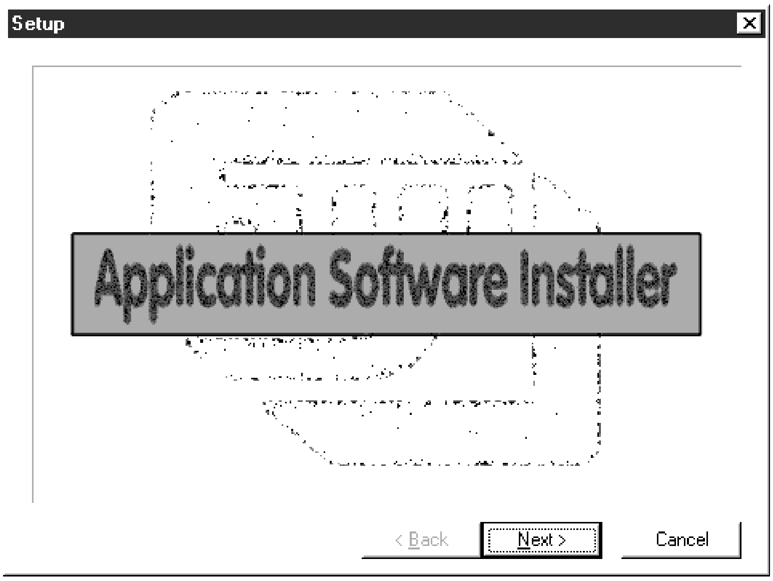
◆ NOTE ◆

Reference values indicated in the [ ] such as [350] are currently under consideration and consequently tentative.

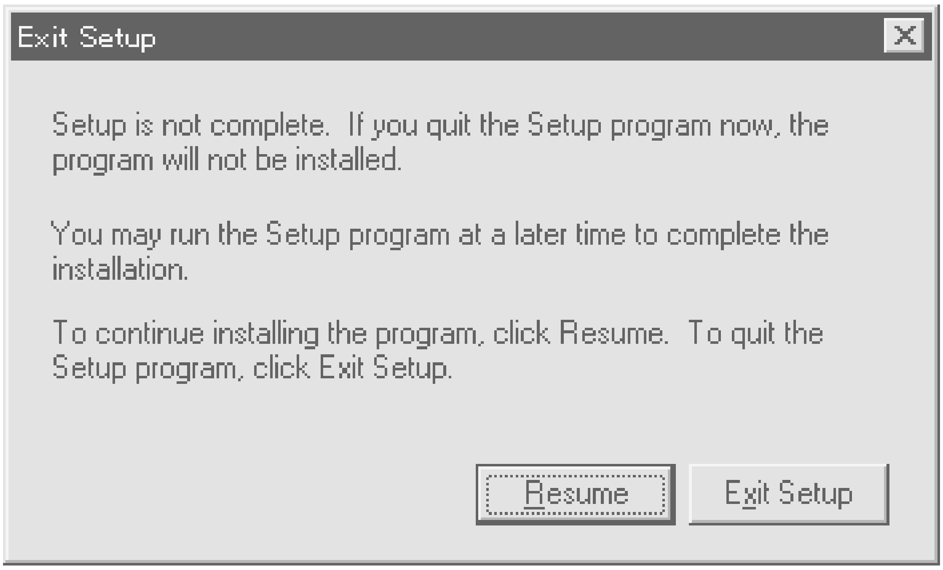
■ Displaying the Test Pattern

(1) Insert the QA-WS application CD-ROM into the CD-ROM drive.

(2) The following screen appears.
Click [Cancel] to close the screen.


Setup
Application Software Installer
< Back
Next >
Cancel

(3) Click [Exit Setup].


Exit Setup

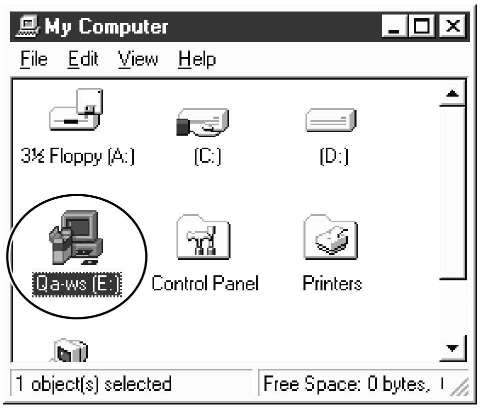
Setup is not complete. If you quit the Setup program now, the program will not be installed.

You may run the Setup program at a later time to complete the installation.

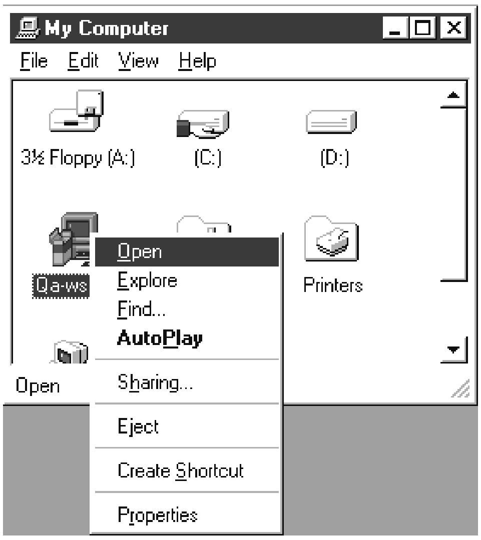
To continue installing the program, click Resume. To quit the Setup program, click Exit Setup.

Resume
Exit Setup

(4) Double-click "My Computer" on the desktop.
Right-click "QA-WS".

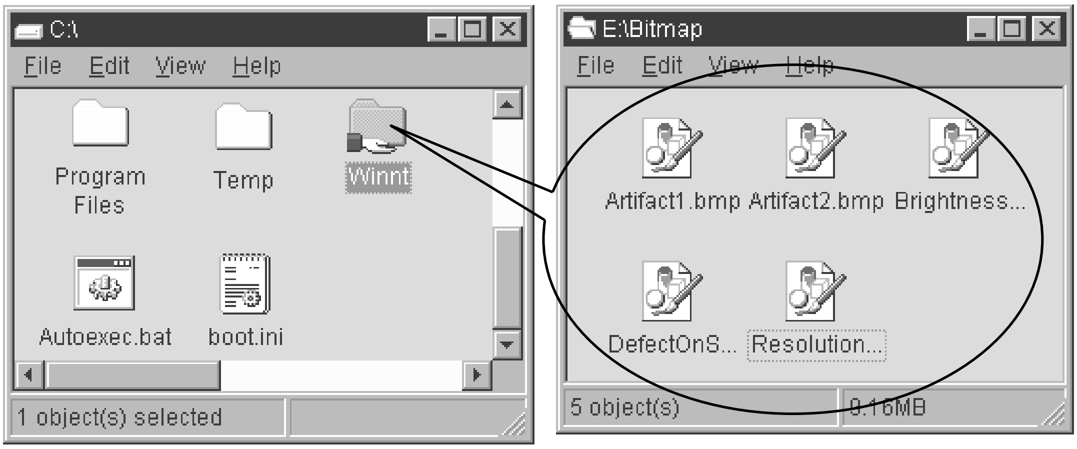

My Computer
File Edit View Help
3½ Floppy (A:)
(C:)
(D:)
Qa-ws (E:)
Control Panel
Printers
1 object(s) selected
Free Space: 0 bytes,

(5) Click "Open" at the following screen.


My Computer
File Edit View Help
3½ Floppy (A:)
(C:)
(D:)
Qa-ws
Printers
Open
Open
Explore
Find...
AutoPlay
Sharing...
Eject
Create Shortcut
Properties

(6) Double-click "Bitmap".

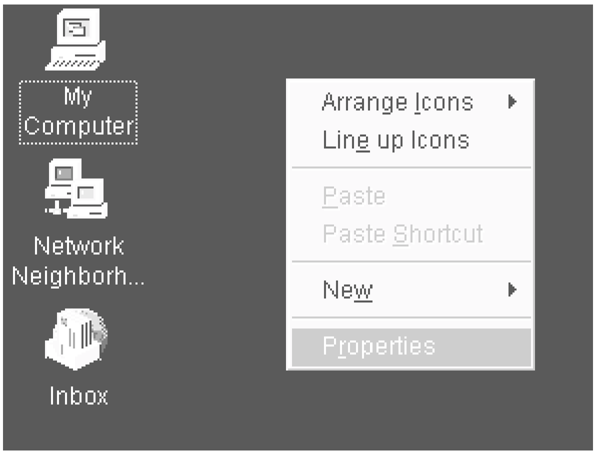
(7) Drag all files (five) in "Bitmap" to "Winnt" of "(C:)".


C:\
File Edit View Help
Program Files
Temp
Winnt
Autoexec.bat
boot.ini
1 object(s) selected
E:\Bitmap
File Edit View Help
Artifact1.bmp
Artifact2.bmp
Brightness...
DefectOnS...
Resolution...
5 object(s)
0.16MB

(8) Right-click on the desktop, and click "MGA Display Properties" at the following screen.

◆ NOTE ◆

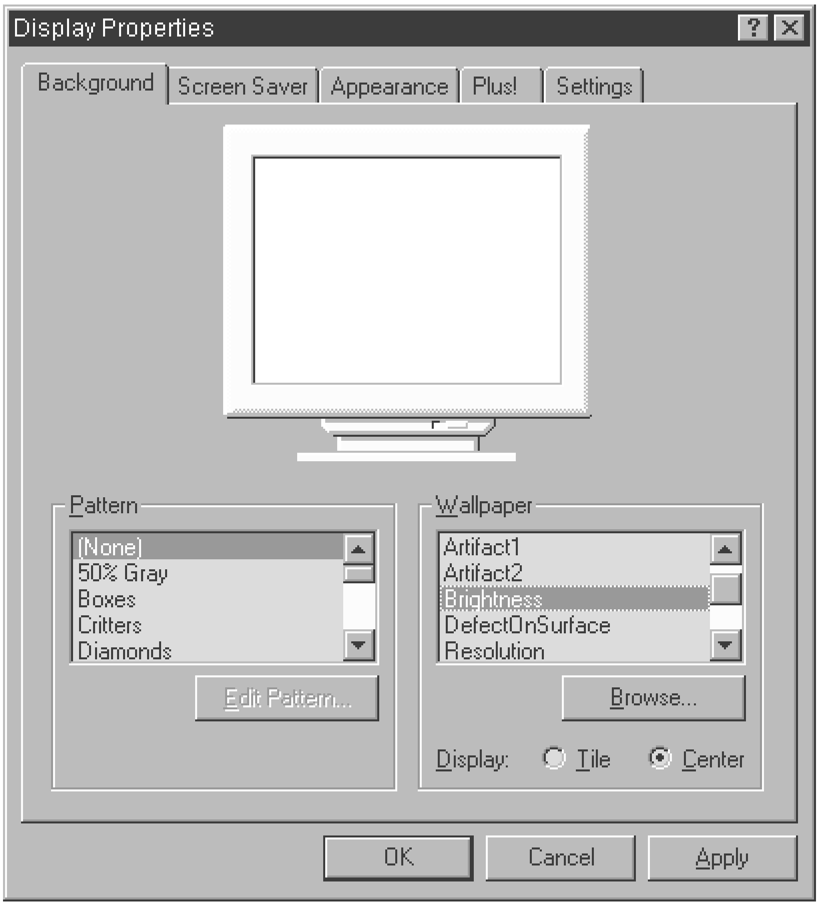
The following describes the procedure for when the video board driver was installed by floppy disks. If installed by CD-ROM, select "Properties" instead of "Matrox Display Properties".


My Computer
Network Neighborh...
Inbox
Arrange Icons
Line up Icons
Paste
Paste Shortcut
New
Properties

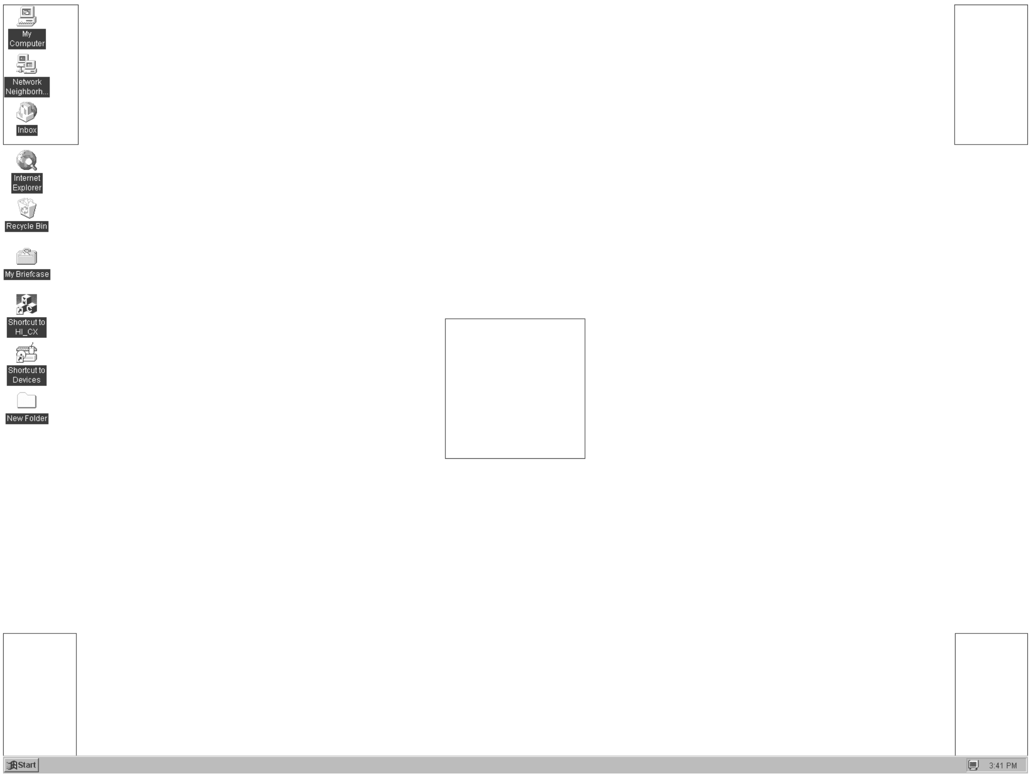
(9) The "Display Properties" dialog box appears.

● Checking Luminance

(1) Click the "Background" tag of the "Display Properties" dialog box.
Select "Brightness" for "Wallpaper" and "Center" for "Display", and click [OK].


Display Properties
Background
Screen Saver
Appearance
Plus!
Settings
Pattern
(None)
50% Gray
Boxes
Critters
Diamonds
Edit Pattern...
Wallpaper
Artifact1
Artifact2
Brightness
DefectOnSurface
Resolution
Browse...
Display: ○ Tile ● Center
OK
Cancel
Apply

(2) The test pattern appears.


My Computer
Network Neighborh...
Inbox
Internet Explorer
Recycle Bin
My Briefcase
Shortcut to HI_CX
Shortcut to Devices
New Folder
Start
3:41 PM

(3) Place the luminance meter at the center of the CRT screen and at the four corners and measure the luminance.
The maximum luminance at the CRT screen should be [350] cd/m^2 or more.
The relative difference between the four corners and center of the screen should be [35]% or less.
(Display the all white pattern for 20 minutes and set the bright and contrast controls to max.)

(4) Set the luminance at the center of the screen to [250±10] cd/m^2 using the contrast control as a condition for measuring the resolution.

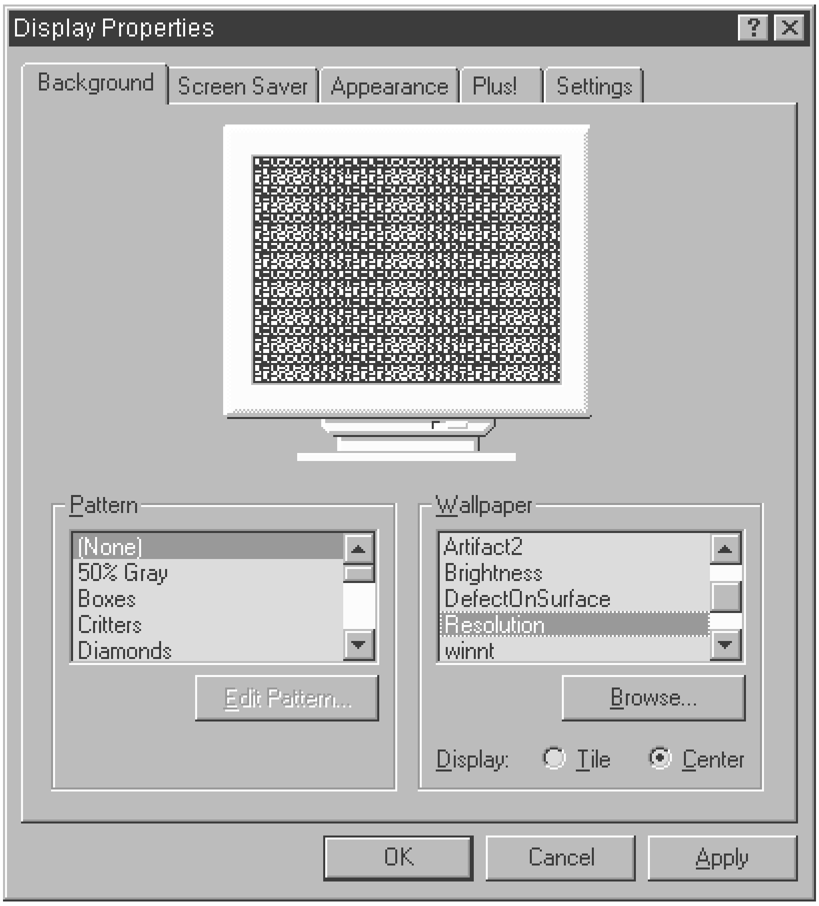
● Checking the Resolution

◆ NOTE ◆

Set the luminance at the center of the screen to [250±10] cd/m^2 using the all white pattern beforehand before displaying this test pattern.

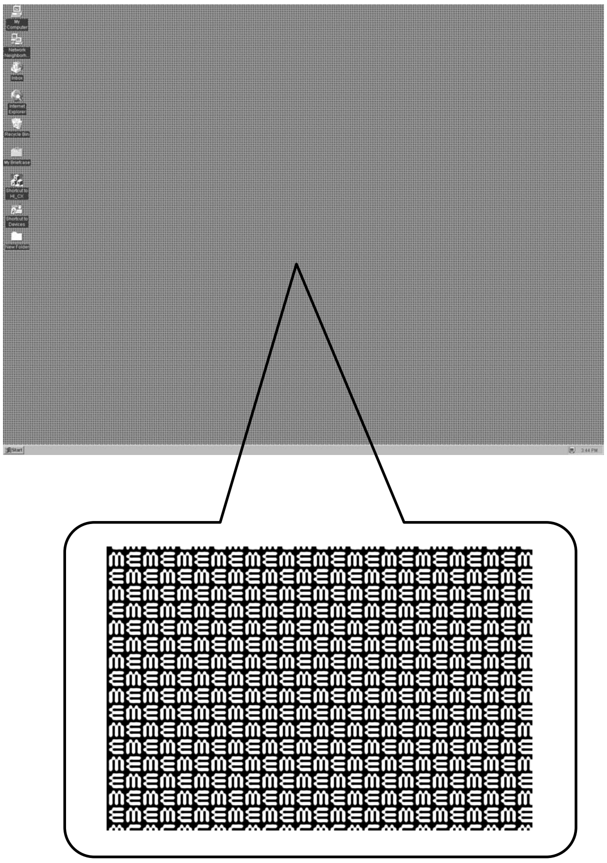
(1) Click the "Background" tag of the "Display Properties" dialog box.

Select "Resolution" for "Wallpaper" and "Center" for "Display", and click [OK].


Display Properties
?
Background
Screen Saver
Appearance
Plus!
Settings
Pattern
(None)
50% Gray
Boxes
Critters
Diamonds
Edit Pattern...
Wallpaper
Artifact2
Brightness
DefectOnSurface
Resolution
winnt
Browse...
OK
Cancel
Apply

Display: ○ Tile ● Center

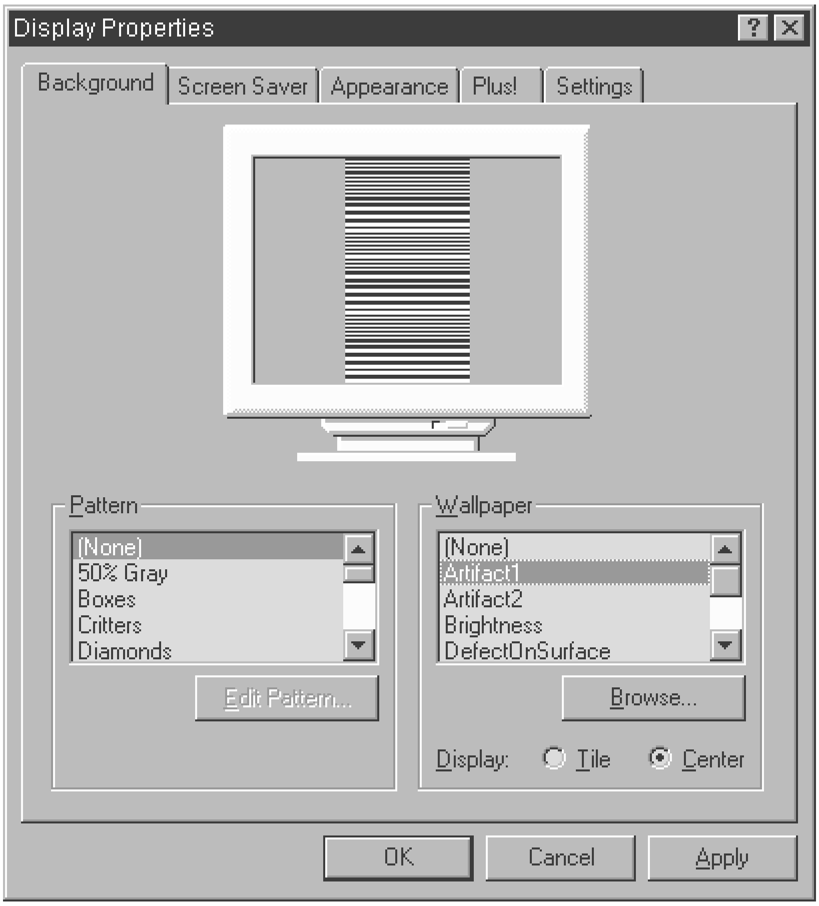
(2) The test pattern appears.


My Computer
Network Neighborh...
Inbox
Internet Explorer
Recycle Bin
My Briefcase
Shortcut to HI_CX
Shortcut to Devices
New Folder
Start
3:44 PM

(3) The M and E test patterns should be visible.

● Checking Artifact 1

(1) Click the "Background" tag of the "Display Properties" dialog box.
Select "Artifact 1" for "Wallpaper" and "Center" for "Display", and click [OK].

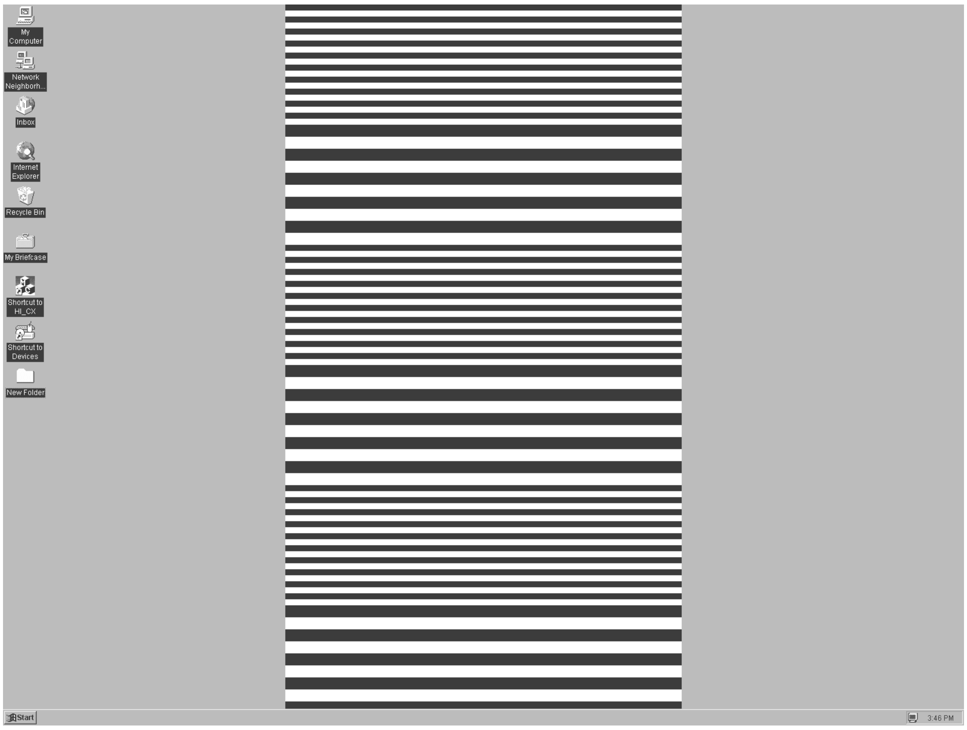


Display Properties
? ✕
Background
Screen Saver
Appearance
Plus!
Settings
Pattern
(None)
50% Gray
Boxes
Critters
Diamonds
Edit Pattern...
Wallpaper
(None)
Artifact1
Artifact2
Brightness
DefectOnSurface
Browse...
OK
Cancel
Apply

Wallpaper: Artifact1

Display: ○ Tile ● Center

(2) The test pattern appears.



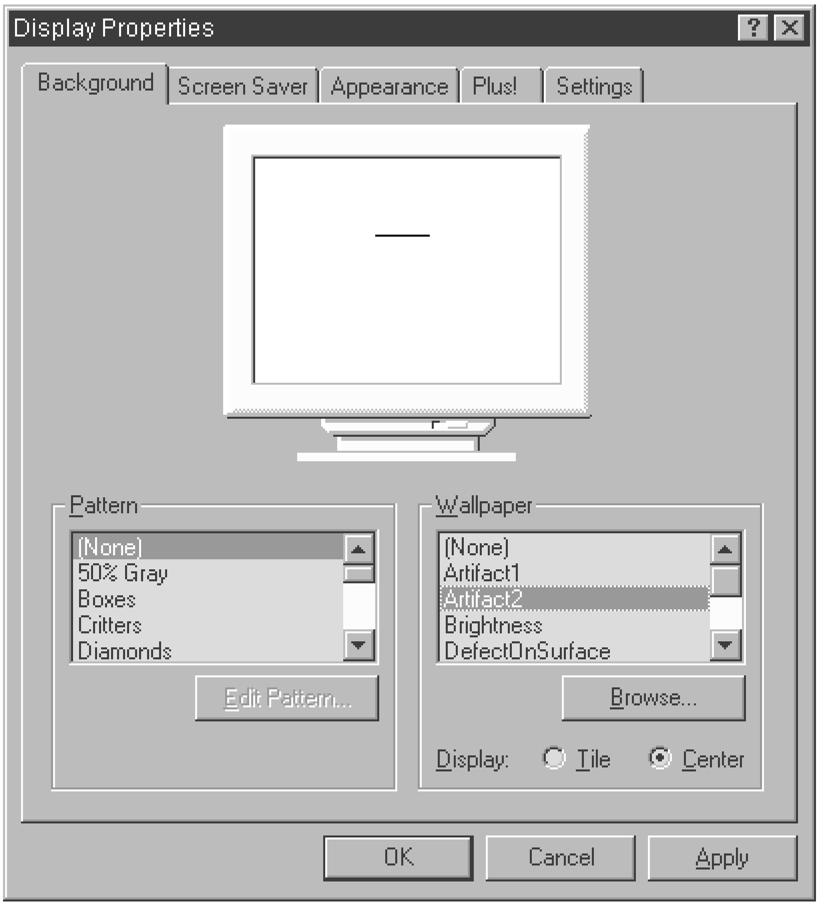
My Computer
Network Neighborh...
Inbox
Internet Explorer
Recycle Bin
My Briefcase
Shortcut to HI_CX
Shortcut to Devices
New Folder
Start
3:46 PM

(3) There should be [no conspicuous artifacts] on the whole CRT screen and the edges of the chart 50 cm from the CRT.

- Ringing .... No conspicuous ringing for 50 cm visible distance
- Jitter .... No jitters for 50 cm visible distance
- Swimming ..... No swimming for 50 cm visible distance.
- Tailing .... No conspicuous patterns that emphasize the edges for 50 cm visible distance.

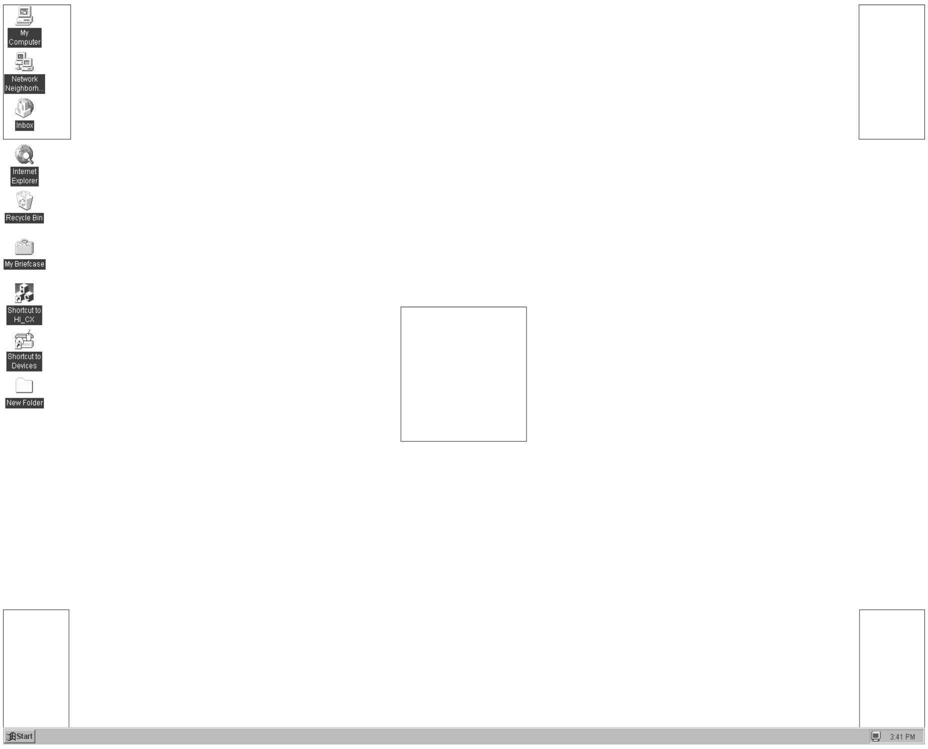
● Checking Artifact 2

(1) Click the "Background" tag of the "Display Properties" dialog box.
Select "Artifact2" for "Wallpaper" and "Center" for "Display", and click [OK].


Display Properties
?
Background
Screen Saver
Appearance
Plus!
Settings
Pattern
(None)
50% Gray
Boxes
Critters
Diamonds
Edit Pattern...
Wallpaper
(None)
Artifact1
Artifact2
Brightness
DefectOnSurface
Browse...
OK
Cancel
Apply

Display: ○ Tile ● Center

(2) The test pattern appears.

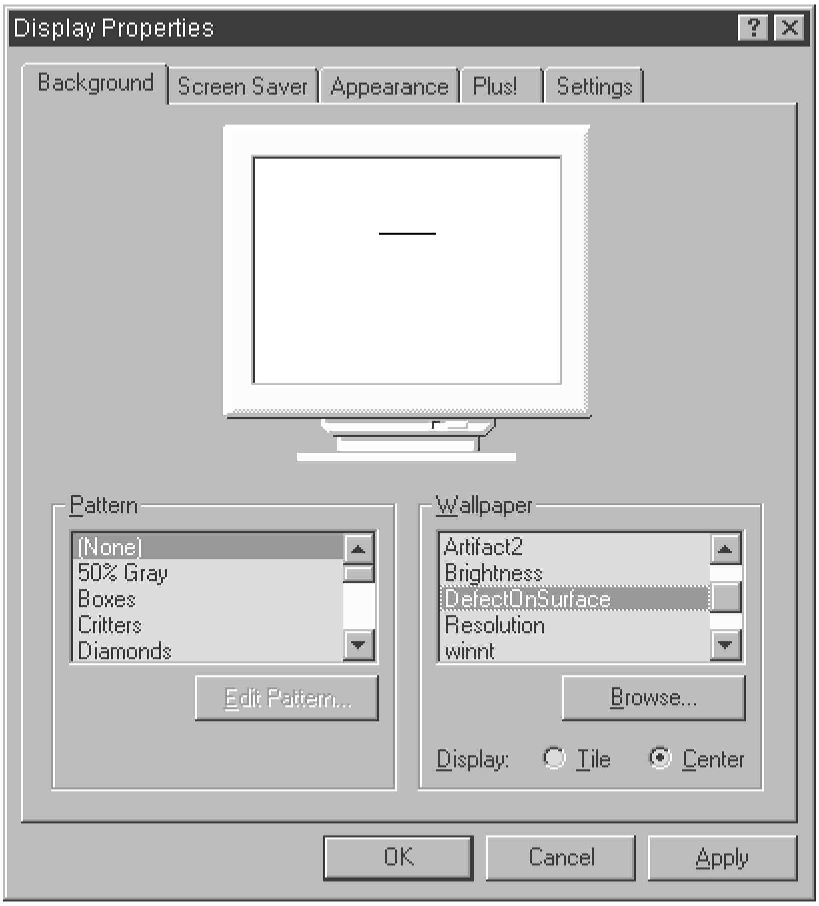

My Computer
Network Neighborh...
Inbox
Internet Explorer
Recycle Bin
My Briefcase
Shortcut to HI_CX
Shortcut to Devices
New Folder
Start
3:41 PM

(3) There should be [no conspicuous artifacts] on the whole CRT screen.

- Inconsistency .... No conspicuous inconsistency for 50 cm visible distance.
- Flickering .... No conspicuous flickering for 50 cm visible distance.

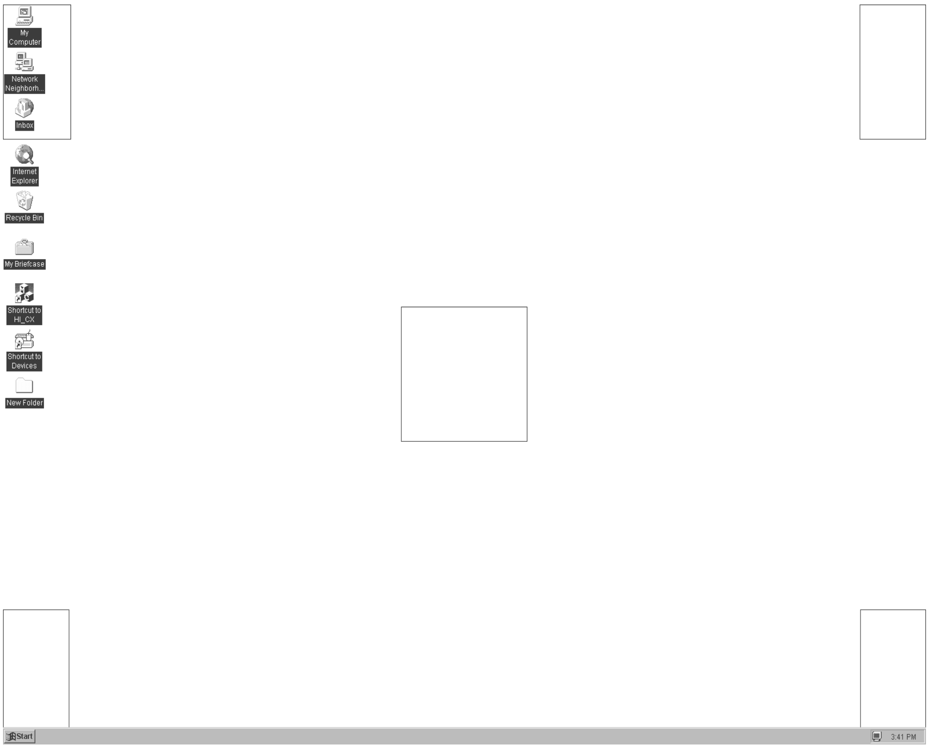
● Chipping

(1) Click the "Background" tag of the "Display Properties" dialog box.
Select "Defect On Surface" for "Wallpaper" and "Center" for "Display", and click [OK].


Display Properties
?
Background
Screen Saver
Appearance
Plus!
Settings
Pattern
(None)
50% Gray
Boxes
Critters
Diamonds
Edit Pattern...
Wallpaper
Artifact2
Brightness
DefectOnSurface
Resolution
winnt
Browse...
OK
Cancel
Apply

Display: ○ Tile ● Center

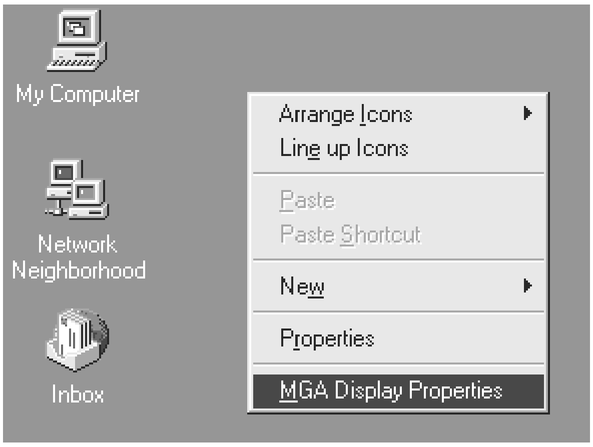
(2) The test pattern appears.


My Computer
Network Neighborh...
Inbox
Internet Explorer
Recycle Bin
My Briefcase
Shortcut to HI_CX
Shortcut to Devices
New Folder
Start
3:41 PM

(3) There should be no chipping of the screen of above [0.41] mm on average in the rectangular area of 254 mm x 343 mm at the center of the florescent face.

■ Ending Checking of Picture Quality

(1) Right-click on the desktop, and click "Properties" at the following screen.


My Computer
Network Neighborhood
Inbox
Arrange Icons
Line up Icons
Paste
Paste Shortcut
New
Properties
MGA Display Properties

(2) At the "Display Properties" dialog box, click the "Background" tag.
Select "No" for "Wallpaper" and click [OK].

■ Adjusting the Screen Size and Screen Position

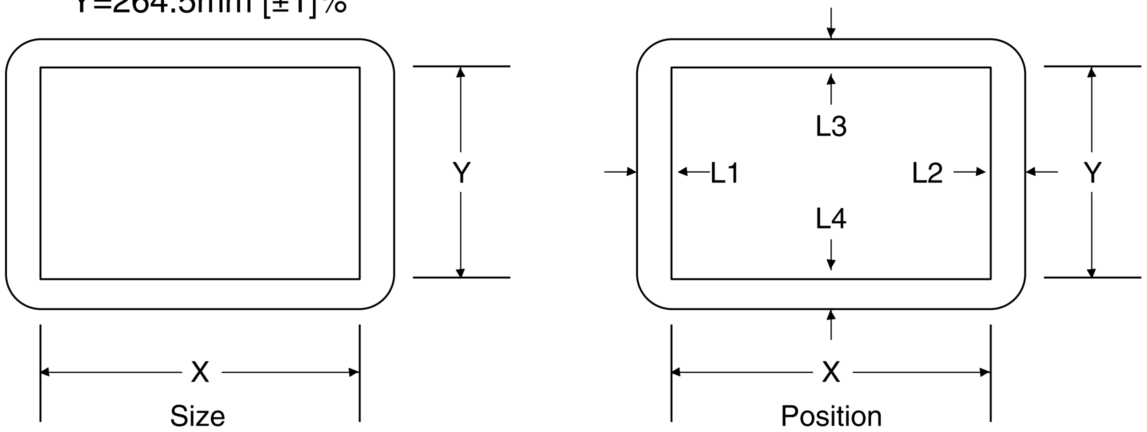
Adjust to the following size and position using the knobs in front of the CRT monitor.

X=360mm [±1]%

Y=264.5mm [±1]%

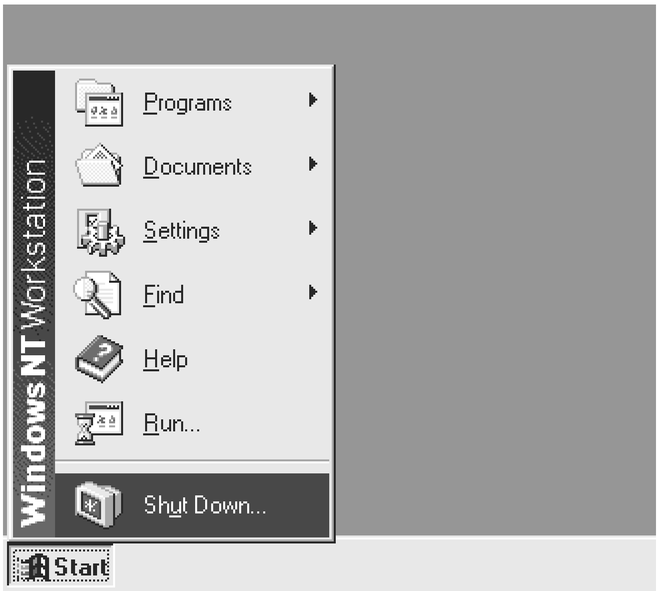
$|L1-L2|/X \leqq [1.0]\%$

$|L1-L2|/X \leqq [1.0]\%$

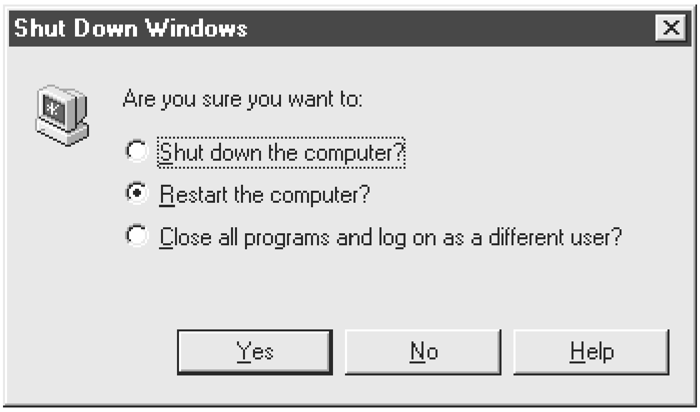

Y
X
Size
L3
L1
L2
Y
L4
X
Position

3.5 Starting Up the System

(1) Click [Start] and then "Shut Down".


Windows NT Workstation
Programs
Documents
Settings
Find
Help
Run...
Shut Down...
Start

(2) At the following screen, click the "Restart the computer?" and then [Yes].


Shut Down Windows
Yes
No
Help

Are you sure you want to:

○ Shut down the computer?

● Restart the computer?

○ Close all programs and log on as a different user?

(3) The computer restarts and the QA-WS application starts.

4. Setting the OS

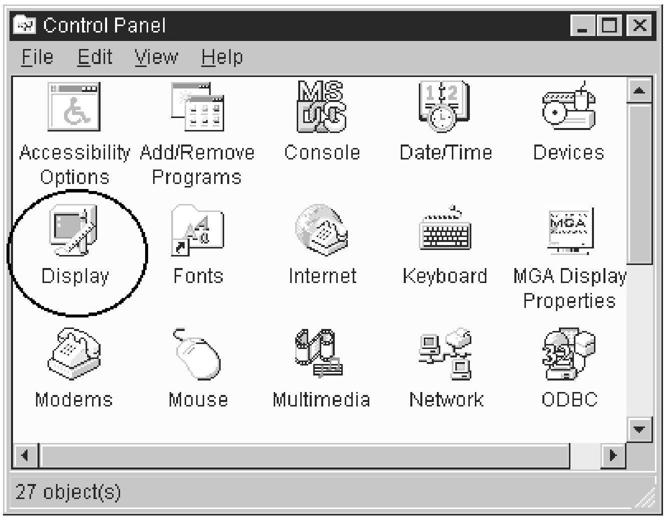
4.1 Setting the Screen Saver

Set the screen saver to prevent "burnout" of the 21" CRT monitor.

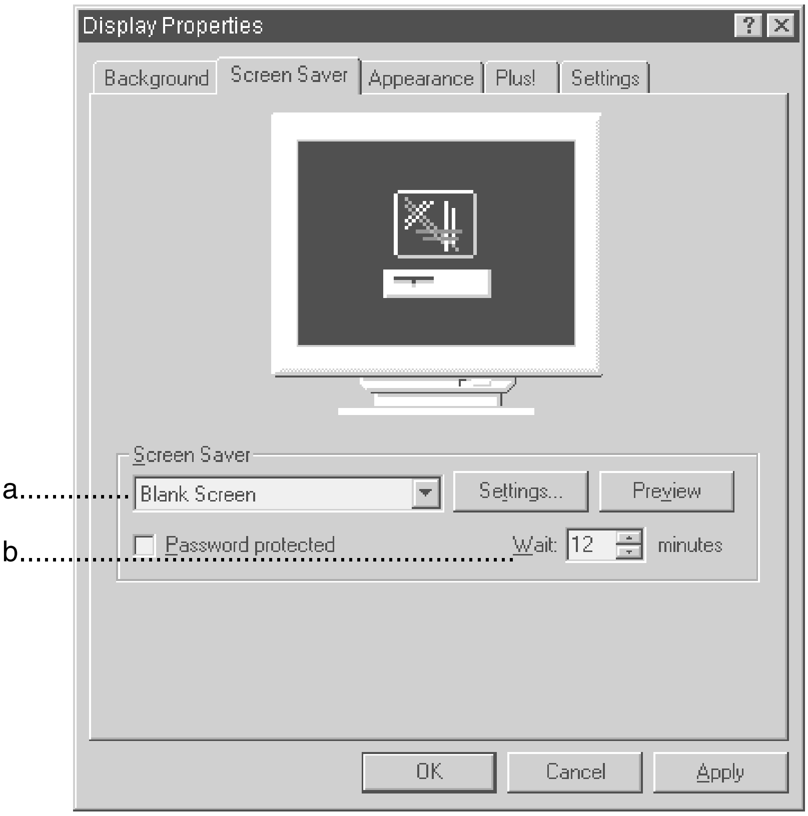
(1) Double-click "My Computer" on the Windows NT desktop.

(2) Double-click "Control Panel".

(3) Double-click "Display".


Control Panel
File
Edit
View
Help
Accessibility Options
Add/Remove Programs
Console
Date/Time
Devices
Display
Fonts
Internet
Keyboard
MGA Display Properties
Modems
Mouse
Multimedia
Network
ODBC
27 object(s)

(4) The "Display Properties" dialog box appears.
Click the "Screen Saver" tag.
Set the "Screen Saver " and "Wait" boxes.



Display Properties
?
Background
Screen Saver
Appearance
Plus!
Settings
Screen Saver
a.
Blank Screen
Settings...
Preview
b.
☐ Password protected
Wait: 12
minutes
OK
Cancel
Apply

a. Select "Blank Screen"
b. Select 12 (minutes)

◆ *REFERENCE* ◆

Select "Blank Screen" instead of "None" at "Screen Saver".

(5) After setting, click [Apply] and then [OK].

(6) Close all desktop menus.

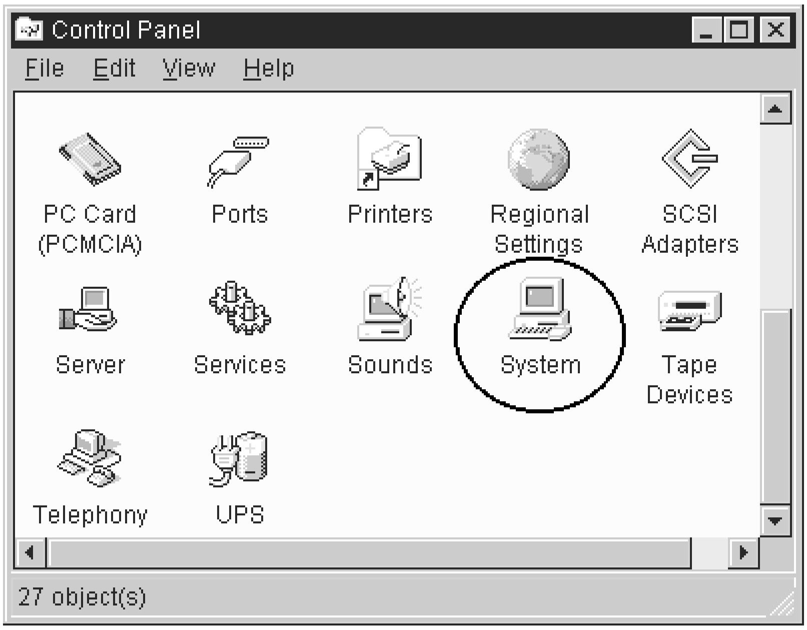
4.2 Setting the System Start Up Time

Perform the following procedure to reduce the waiting time for starting up the system (OS Loader).

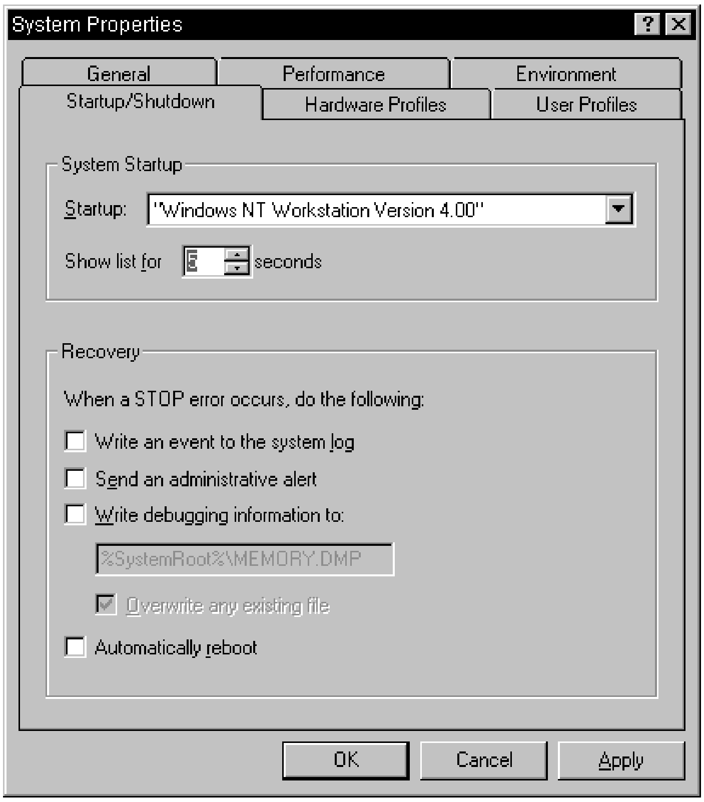
(1) Double-click "My Computer" on the desktop.

(2) Double-click "Control Panel".

(3) Double-click "System".


Control Panel
File Edit View Help
PC Card (PCMCIA)
Ports
Printers
Regional Settings
SCSI Adapters
Server
Services
Sounds
System
Tape Devices
Telephony
UPS
27 object(s)

(4) Click the "Startup/Shutdown" tag, enter 5 seconds in the "Show list for" box, click [Apply], and then [OK].


System Properties
General
Performance
Environment
Startup/Shutdown
Hardware Profiles
User Profiles
System Startup
Recovery
OK
Cancel
Apply

Startup: "Windows NT Workstation Version 4.00"

Show list for 5 seconds

When a STOP error occurs, do the following:

☐ Write an event to the system log

☐ Send an administrative alert

☐ Write debugging information to:

%SystemRoot%\MEMORY.DMP

☑ Overwrite any existing file

☐ Automatically reboot

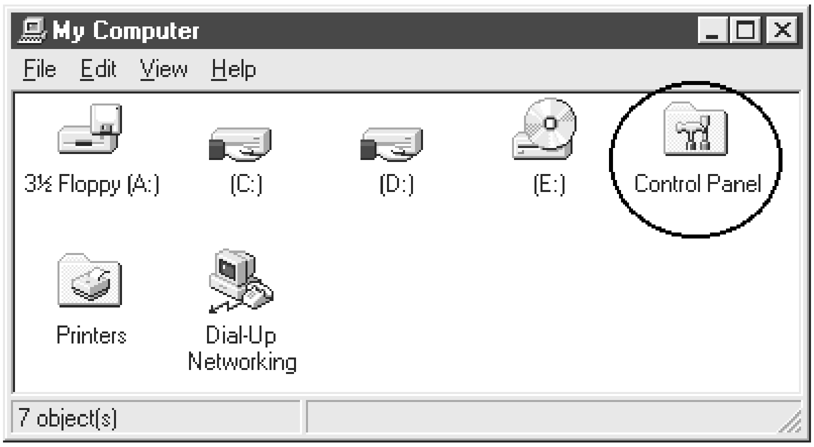
(5) Close all desktop menus.

4.3 Configuring Network Information

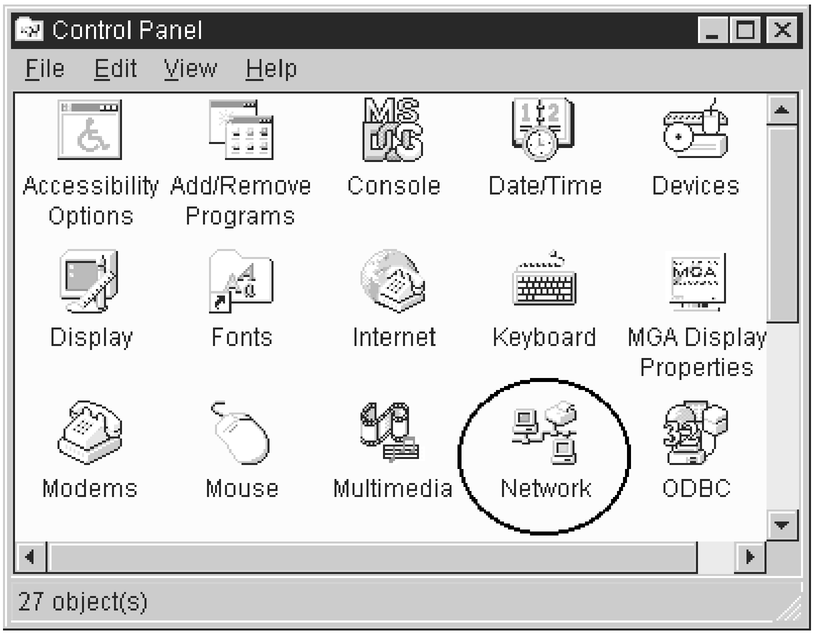
Configure the network information on the Windows NT desktop.

(1) Double-click "My Computer" on the Windows NT desktop.

(2) Double-click "Control Panel".


My Computer
File Edit View Help
3½ Floppy (A:)
(C:)
(D:)
(E:)
Control Panel
Printers
Dial-Up Networking
7 object(s)

(3) Double-click "Network".


Control Panel
File Edit View Help
Accessibility Options
Add/Remove Programs
Console
Date/Time
Devices
Display
Fonts
Internet
Keyboard
MGA Display Properties
Modems
Mouse
Multimedia
Network
ODBC
27 object(s)

◆ *REFERENCE* ◆

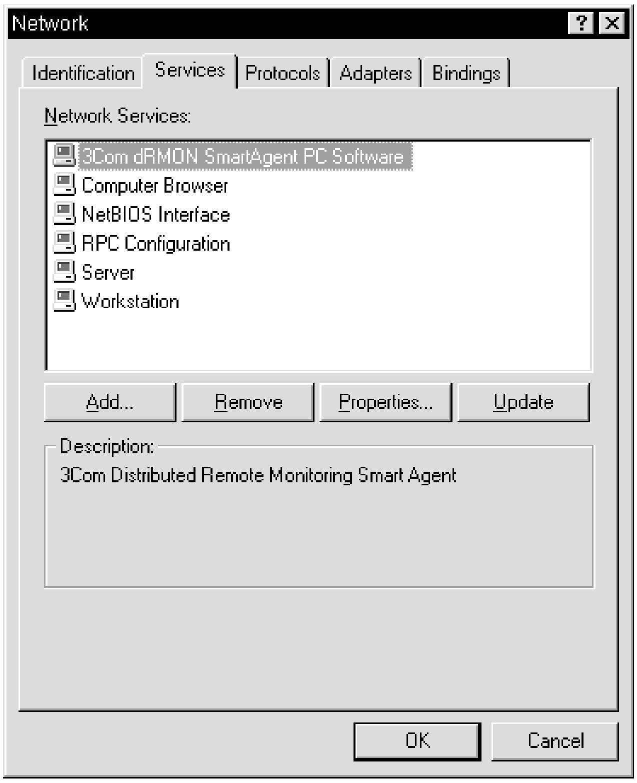
Configure the network information using "Identification" and "Protocols" of the "Network" dialog box. Leave other network information at their default settings.
The "Services", "Adapters", and "Bindings" dialog boxes are described in the following for reference.

■ Services

Clicking the "Services" tag will list the network services installed in this equipment.

Network services support network operations executed by Windows NT.

Check that the dialog box is set as follows.


Network
?
Identification
Services
Protocols
Adapters
Bindings
Add...
Remove
Properties...
Update
OK
Cancel

Network Services:

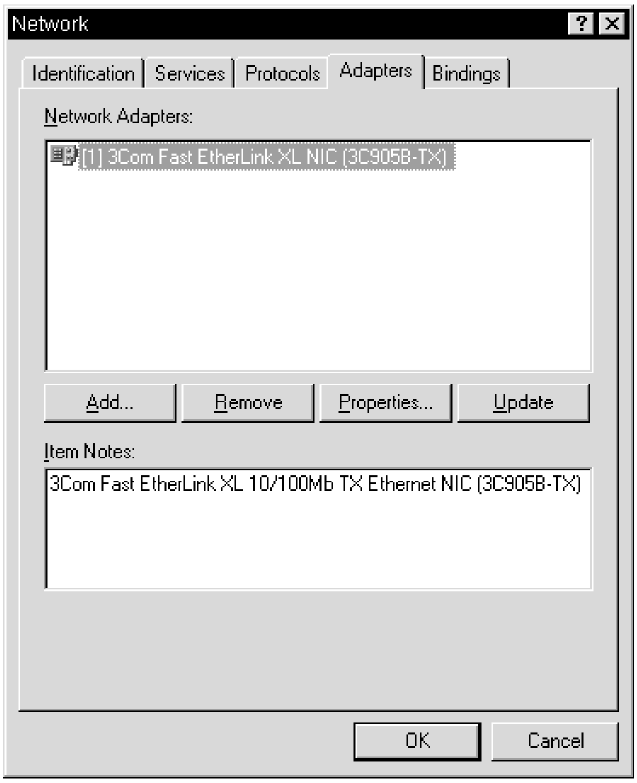
- 3Com dRMON SmartAgent PC Software
- Computer Browser
- NetBIOS Interface
- RPC Configuration
- Server
- Workstation

Description:
3Com Distributed Remote Monitoring Smart Agent

■ Adapters

The network card connected to this equipment is displayed under "Network Adapters :".

Check that "3Com EtherLink XL NIC (3C905B-TX)" adapter is displayed.


Network
?
Identification
Services
Protocols
Adapters
Bindings
Add...
Remove
Properties...
Update
OK
Cancel

Network Adapters:

- [1] 3Com Fast EtherLink XL NIC (3C905B-TX)

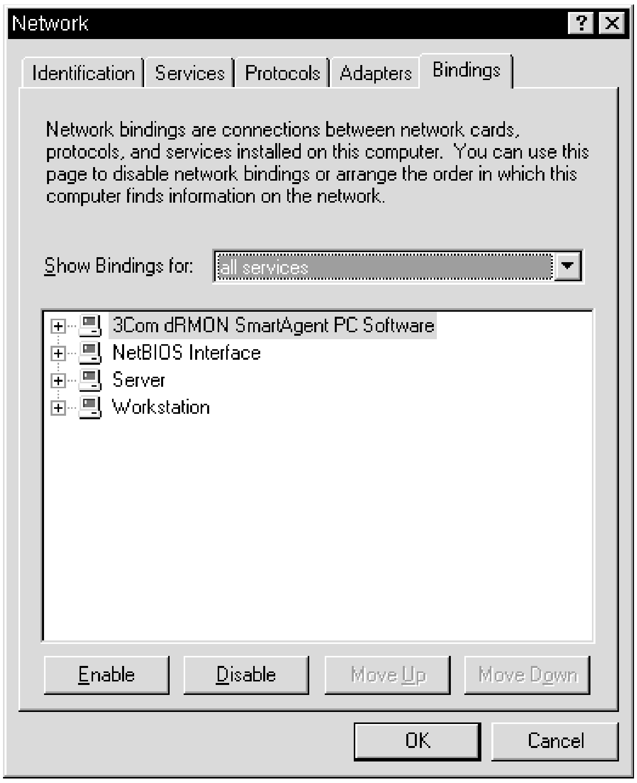
Item Notes:
3Com Fast EtherLink XL 10/100Mb TX Ethernet NIC (3C905B-TX)

■ Bindings

Network bindings are connections that enable communication between the network card, protocols, and network services installed in this equipment.

At this dialog box, bindings can be invalidated, and the order in which this equipment searches for information can be changed.

Check that the dialog box is set as follows.


Network
Identification
Services
Protocols
Adapters
Bindings
Enable
Disable
Move Up
Move Down
OK
Cancel

Network bindings are connections between network cards, protocols, and services installed on this computer. You can use this page to disable network bindings or arrange the order in which this computer finds information on the network.

Show Bindings for: all services

- 3Com dRMON SmartAgent PC Software
- NetBIOS Interface
- Server
- Workstation

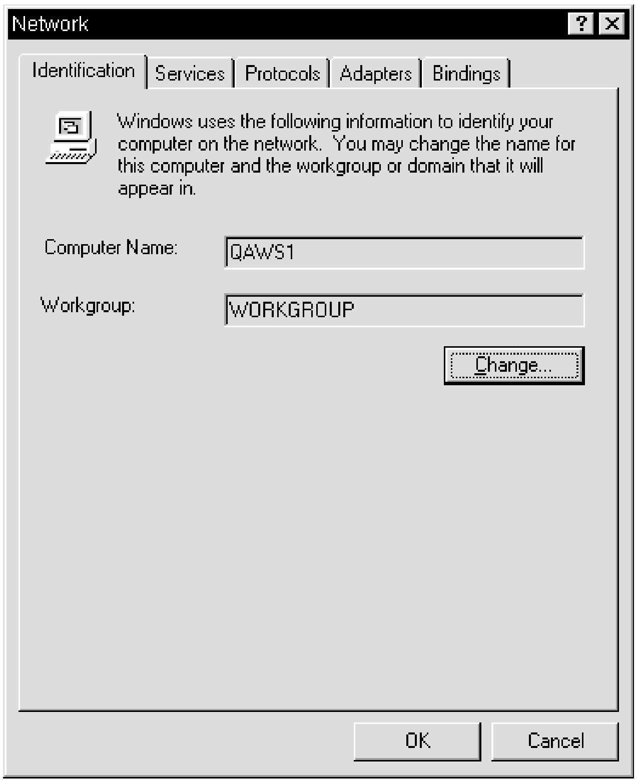
■ Specifying the Host Name

◆ NOTE ◆

Changing the host name will disable display of images saved on the HD at shipment.

● If these images need not be displayed after changing the host name, erase the data by selecting "Initialize image datagase".

(1) Click the "Identification" tag and then [Change].



Windows uses the following information to identify your computer on the network. You may change the name for this computer and the workgroup or domain that it will appear in.

Computer Name: QAWS1

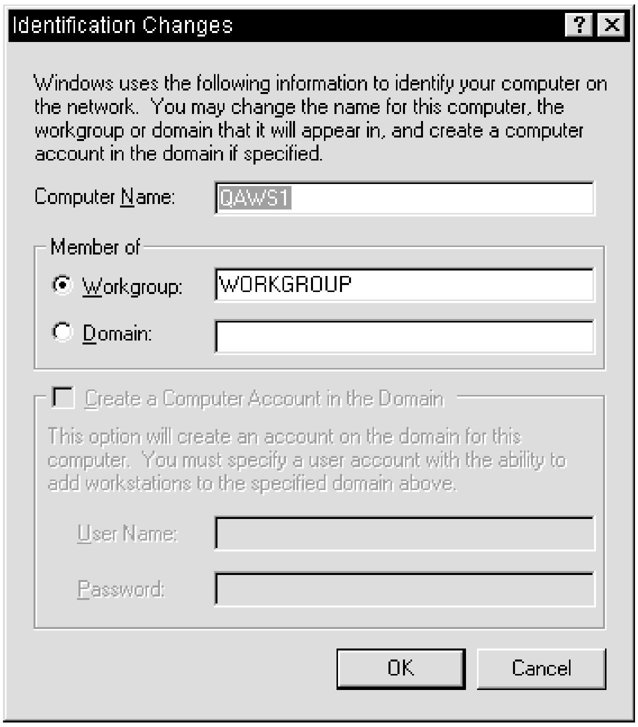
Workgroup: WORKGROUP

Network
?
Identification
Services
Protocols
Adapters
Bindings
Change...
OK
Cancel

(2) Enter the desired host name at "Computer Name:" and click [OK].

◆ REFERENCE ◆

The computer name entered here will be displayed in capital letters even if it was entered in small letters.
Leave "Workgroup" and "Domain" at their default settings.



Identification Changes

Windows uses the following information to identify your computer on the network. You may change the name for this computer, the workgroup or domain that it will appear in, and create a computer account in the domain if specified.

Computer Name: QAWS1

Member of

● Workgroup: WORKGROUP

○ Domain:

☐ Create a Computer Account in the Domain

This option will create an account on the domain for this computer. You must specify a user account with the ability to add workstations to the specified domain above.

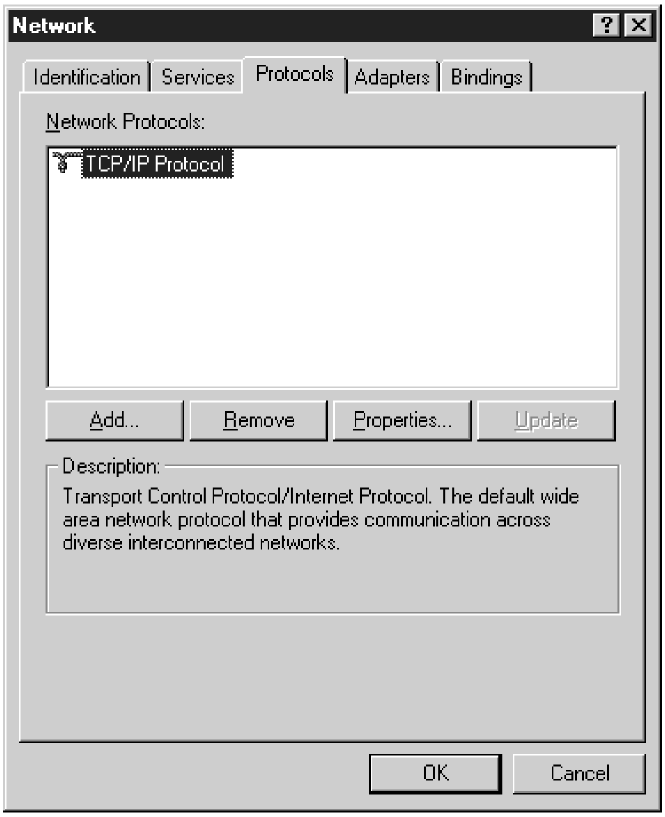
User Name:

Password:

■ Specifying the IP Address and Subnet Mask

(1) Click the "Protocols" tag.

(2) Click [Properties...] to specify the TCP/IP.

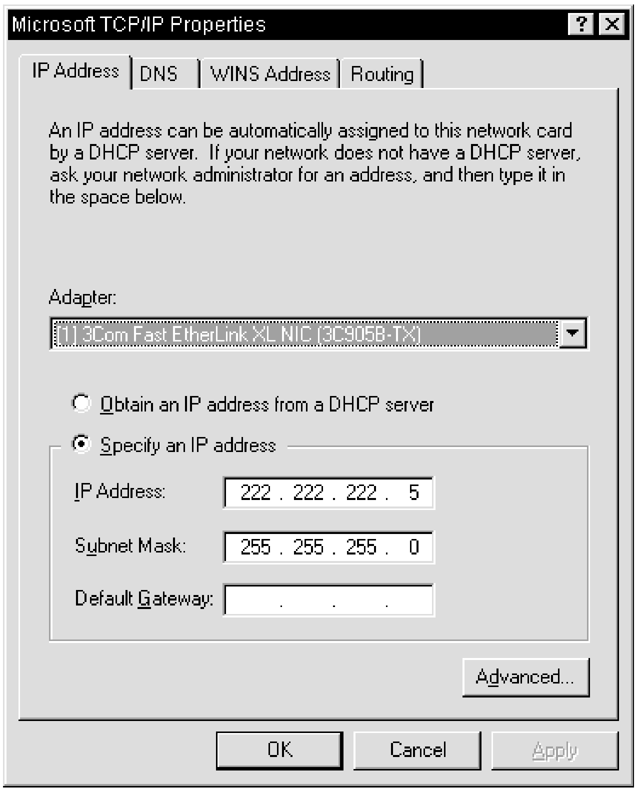

Network
Identification
Services
Protocols
Adapters
Bindings
Network Protocols:
TCP/IP Protocol
Add...
Remove
Properties...
Update
Description:
OK
Cancel

Transport Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

(3) The "Microsoft TCP/IP Properties" dialog box appears.
Click "Specify an IP Address" and enter the IP Address.
Even if not using "Subnet Mask", enter the class-C subnet mask data (255.255.255.0) and click [OK].

◆ NOTE ◆

The system cannot be terminated until the subnet mask data has been entered.



An IP address can be automatically assigned to this network card by a DHCP server. If your network does not have a DHCP server, ask your network administrator for an address, and then type it in the space below.

Adapter:
[1] 3Com Fast EtherLink XL NIC (3C905B-TX)

○ Obtain an IP address from a DHCP server
● Specify an IP address

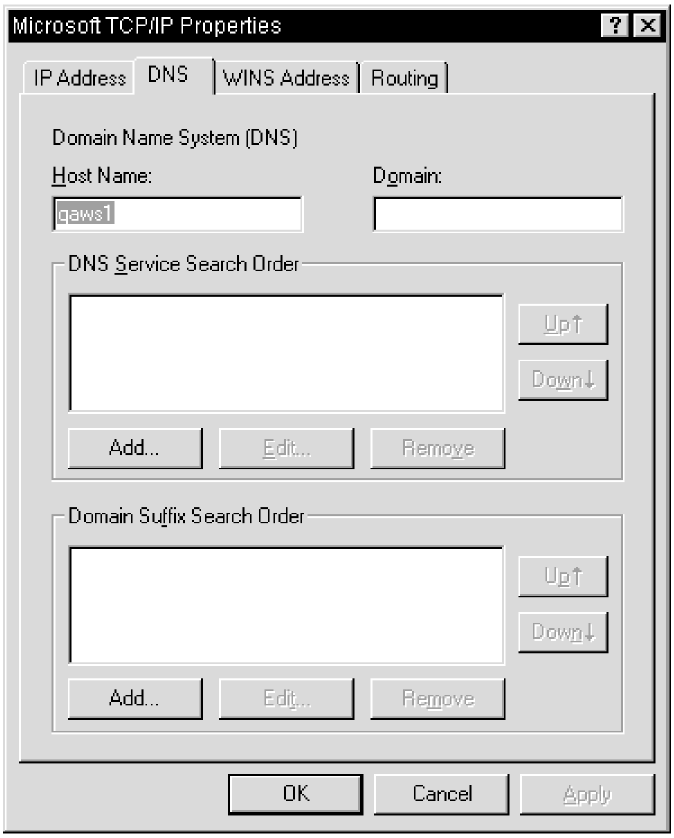
IP Address: 222 . 222 . 222 . 5
Subnet Mask: 255 . 255 . 255 . 0
Default Gateway: . . .

◆ REFERENCE ◆

Set the IP address and subnet mask using "IP Address" of the "Microsoft TCP/IP Properties" dialog box.
Leave the other settings at their default setting.
The "DNS", "WINS Address" and "Routing" dialog boxes are described in the following for reference.

■ DNS

Set this when using the DNS (Domain Name System) server for the host name.
Check that the host name entered at the "Computer Name" box in "■ Specifying the Host Name" is displayed in small letters.



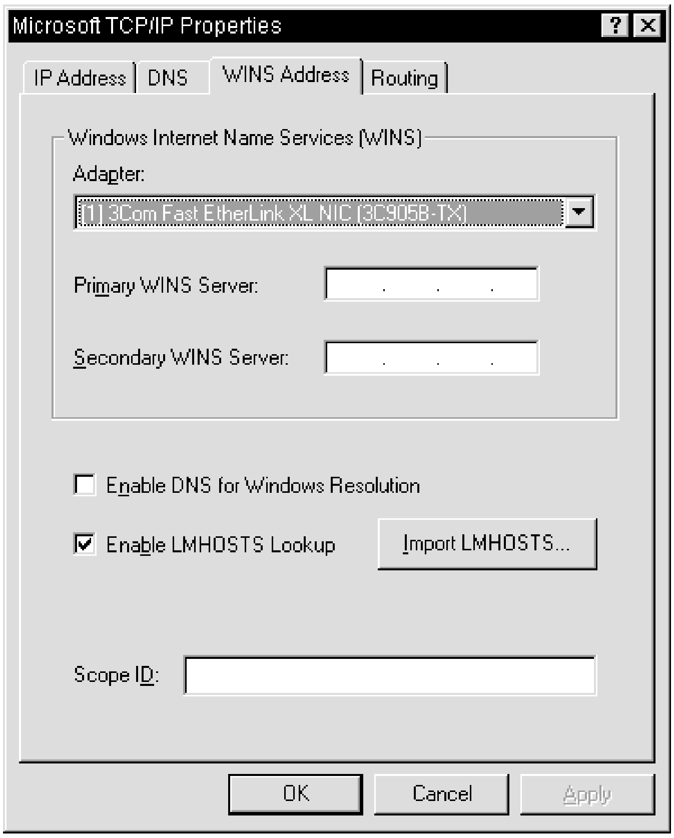
Microsoft TCP/IP Properties
IP Address
DNS
WINS Address
Routing
Domain Name System (DNS)
DNS Service Search Order
Up↑
Down↓
Add...
Edit...
Remove
Domain Suffix Search Order
Up↑
Down↓
Add...
Edit...
Remove
OK
Cancel
Apply

Host Name: qaws1

Domain:

■ WINS Address

Set this when using WINS (Windows Internet Name Service) for the NetBIOS name.
Check that "3Com Fast EtherLink XL NIC (3C905B-TX)" is displayed at "Adapter:".


Microsoft TCP/IP Properties
IP Address
DNS
WINS Address
Routing
Windows Internet Name Services (WINS)
OK
Cancel
Apply
Import LMHOSTS...

Adapter: [1] 3Com Fast EtherLink XL NIC (3C905B-TX)

Primary WINS Server: . . .

Secondary WINS Server: . . .

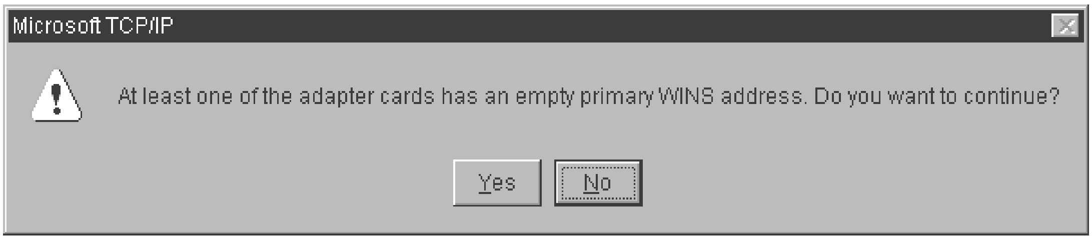
☐ Enable DNS for Windows Resolution

☑ Enable LMHOSTS Lookup

Scope ID:

◆ NOTE ◆

The following message appears when the "TCP/IP Properties" dialog box is closed with the "WINS Address" tag selected.

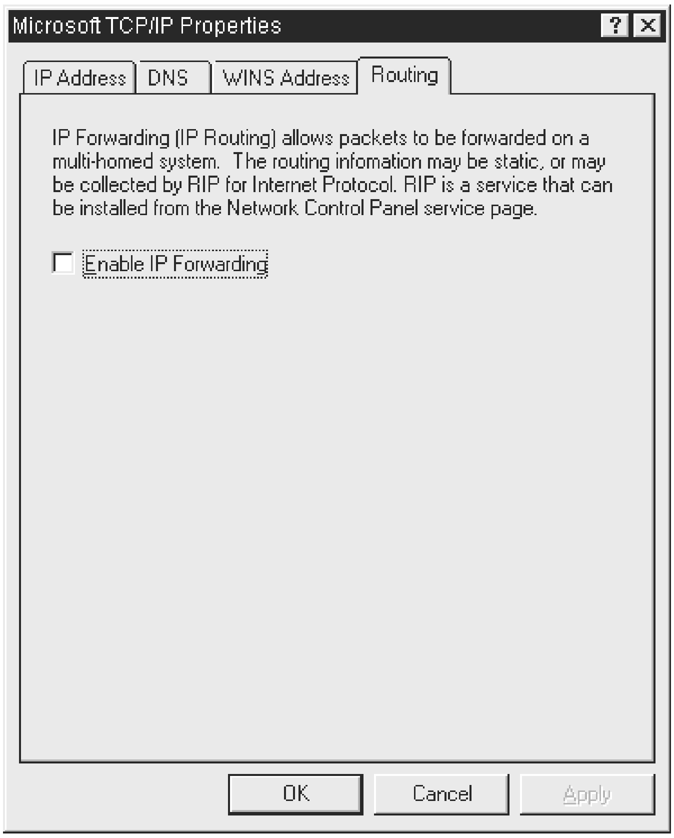

Microsoft TCP/IP
Yes
No

At least one of the adapter cards has an empty primary WINS address. Do you want to continue?

■ Routing

Checking the "Enable IP Forwarding" radio button enabls packets to be transferred on the mutli-home system by IP transfer (routing).

Do not check this button.



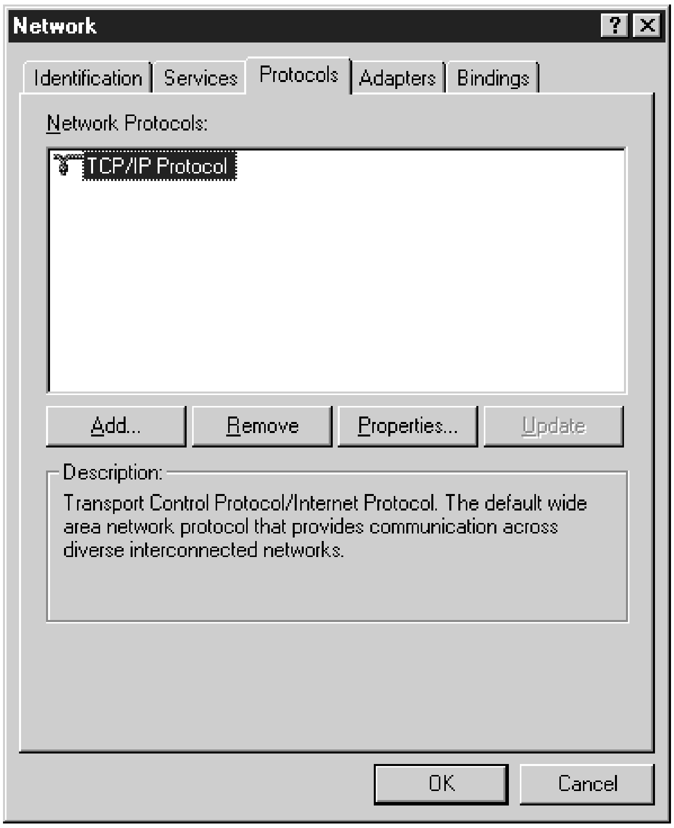
Microsoft TCP/IP Properties
IP Address
DNS
WINS Address
Routing

IP Forwarding (IP Routing) allows packets to be forwarded on a multi-homed system. The routing infomation may be static, or may be collected by RIP for Internet Protocol. RIP is a service that can be installed from the Network Control Panel service page.

☐ Enable IP Forwarding

OK
Cancel
Apply

(1) When the "Network" dialog box appears, click [OK].

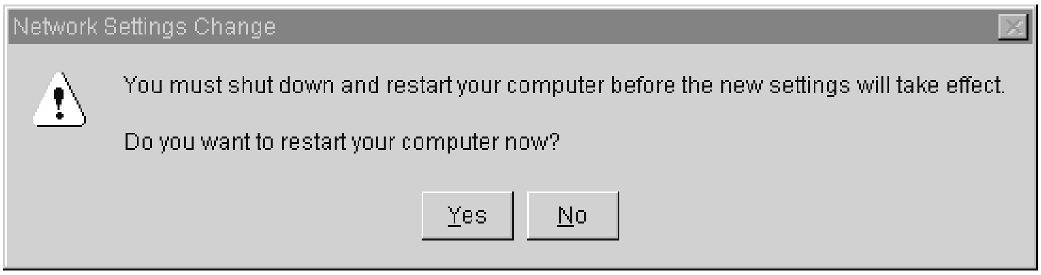


Network
Identification
Services
Protocols
Adapters
Bindings
Network Protocols:
TCP/IP Protocol
Add...
Remove
Properties...
Update

Description:
Transport Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

OK
Cancel

(2) The "Network Settings Change" dialog box appears.
Click [Yes] to restart the unit.



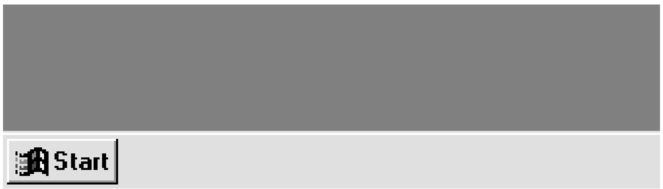
You must shut down and restart your computer before the new settings will take effect.

Do you want to restart your computer now?

5. Setting Field Tool

5.1 Logging onto the Field Tool Utility

(1) Shortly after the unit has been rebooted, the [Start] Bar (shown below) will appear at the bottom of the display. Hold down the <Shift> key.



➔ The “Field Tool: Main Menu” dialog box appears.

◆ REFERENCE ◆

If the <Shift> key is pressed before the Windows NT desktop is displayed, the "Begin Logon" dialog box will appear instead of the "Field Tool: Main Menu".
If the "Logon Information" dialog box appears, click [Shut Down] and then [OK] to restart the unit and start from step (1) again.

◆ NOTE ◆

The QA-WS application will start if the <Shift> key is not pressed.
In this case, use the following procedure to restart the unit.

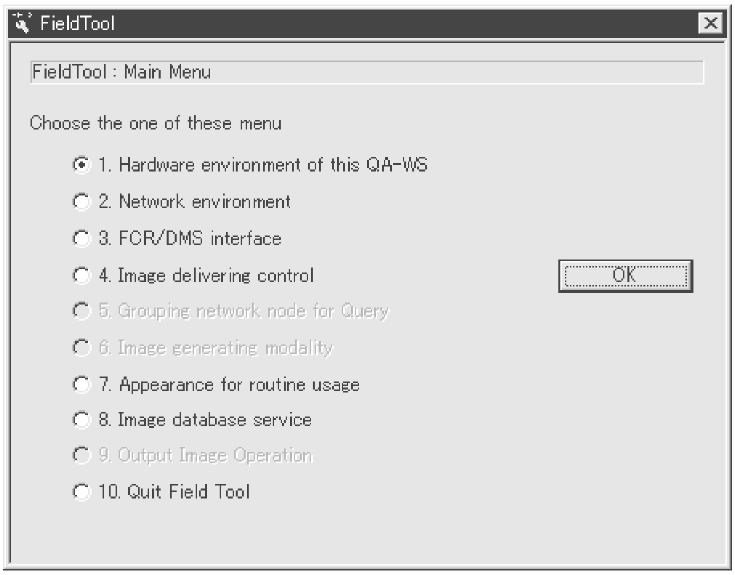
1. *Click the "Shut Down" icon at the QA-WS application startup screen.*
2. *When the "RESTART" screen appears, click [RESTART].*
3. *After the unit has been restarted, repeat above step (1).*

5.2 Configuring the Hardware of This Equipment

Specify the hardware environment of this equipment as follows.

- Size of memory (number of bytes) implemented in this equipment
- Whether this equipment has a QPI01A image processing board
- Parameters for the image processing board (e.g. standard or high density)
- Monitor parameters

(1) At the "Field Tool:Main Menu" dialog box, select "1. Hardware environment of this QA-WS" and click [OK].



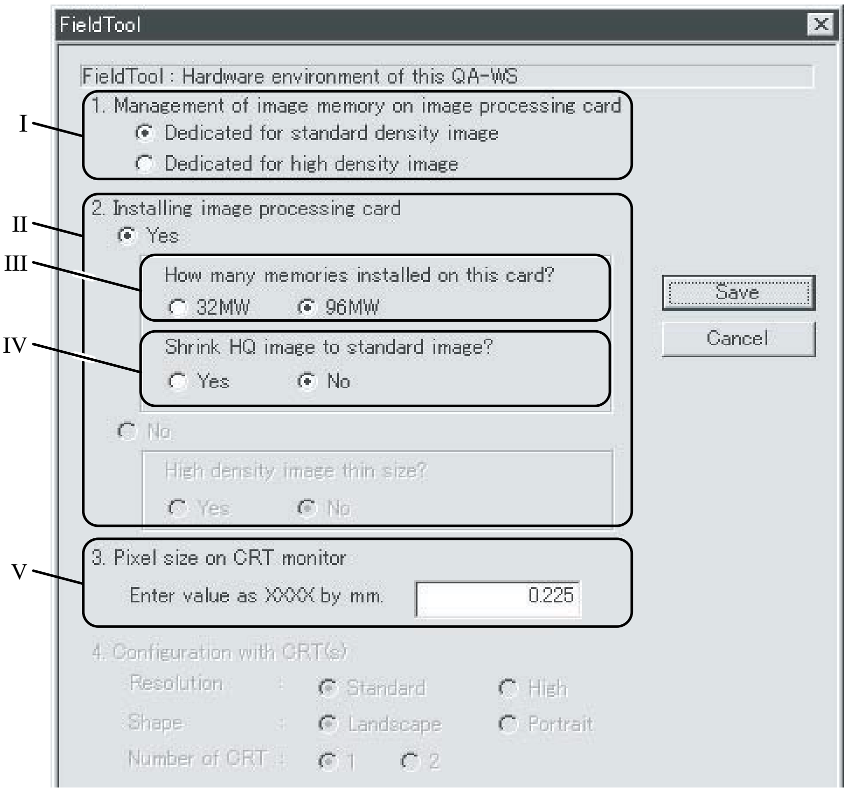
FieldTool

FieldTool : Main Menu

Choose the one of these menu

- ● 1. Hardware environment of this QA-WS
- ○ 2. Network environment
- ○ 3. FCR/DMS interface
- ○ 4. Image delivering control
- ○ 5. Grouping network node for Query
- ○ 6. Image generating modality
- ○ 7. Appearance for routine usage
- ○ 8. Image database service
- ○ 9. Output Image Operation
- ○ 10. Quit Field Tool

(2) Specify the hardware environment.



FieldTool : Hardware environment of this QA-WS

1. Management of image memory on image processing card
   - ● Dedicated for standard density image
   - ○ Dedicated for high density image

2. Installing image processing card
   - ● Yes
     - How many memories installed on this card? ○ 32MW ● 96MW
     - Shrink HQ image to standard image? ○ Yes ● No
   - ○ No
     - High density image thin size? ○ Yes ● No

3. Pixel size on CRT monitor
   - Enter value as XXXX by mm. 0.225

4. Configuration with CRT(s)
   - Resolution : ● Standard ○ High
   - Shape : ● Landscape ○ Portrait
   - Number of CRT : ● 1 ○ 2

FR1B5319.EPS

I. Select whether to use the image processing board (QPI01A) for standard images or high density images (eg:Dedicated for standard density image).

II. Select whether image processing board is present or not (eg:Yes).

III. Select the total memory amount available in the image processing board (eg:96MW).

◆ *NOTE* ◆

High density images require a minimum of 96 MW memory. (Standard 32MW+optional 64MW)

IV. Select whether to convert image data to standard density when displaying high density images (eg: No).

V. Enter the pixel size (pitch) of the 21" CRT monitor (E.g.: 0.225) or enter the pixel size (pitch) of the 19" CRT monitor (E.g.: 0.221 or 0.220).

➥ *REFERENCE*

The pixel size to be entered in this procedure can be obtained as follows.
[CRT width (mm)] / [display pixel count (pixels)] = [pixel size (mm)]
21" CRT (1K landscape type) ..... 360 mm / 1600 pixels =0.225 mm
19" CRT (Dell P991/992) .... 354 mm / 1600 pixels =0.221 mm
19" CRT (Dell M992)................... 352 mm / 1600 pixels =0.220 mm

☞ When the LCD (SL-IC300) is used, see “Maintenance - Appendix A Setups Required for Connecting the SL-IC300 Monitor”.

☞ When the LCD (SL-IC200) is used, see “Maintenance - Appendix D Setup Necessary for Connection of SL-IC200”.

VI. Specify monitor the type (Standard or Landscape) and the number (1 or 2) of CRT monitors connected.

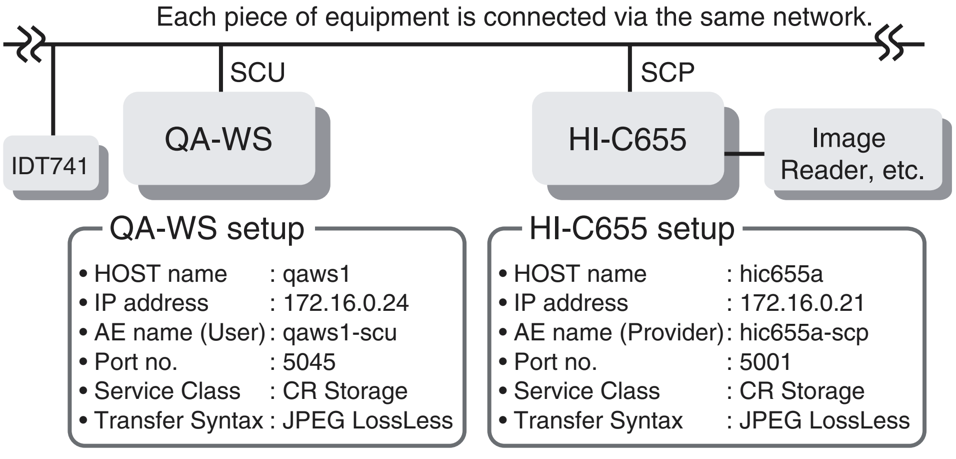
(3) After setting, click [Save] to save the settings.

5.3 Configuring the Network Environment

Described below is how to configure the QA-WS network taking DICOM connection as an example.

◆ *NOTE* ◆

When both FINP and DICOM have been specified, DICOM will be used prevailingly.


Each piece of equipment is connected via the same network.
SCU
SCP
IDT741
QA-WS
HI-C655
Image Reader, etc.

QA-WS setup

- HOST name : qaws1
- IP address : 172.16.0.24
- AE name (User) : qaws1-scu
- Port no. : 5045
- Service Class : CR Storage
- Transfer Syntax : JPEG LossLess

HI-C655 setup

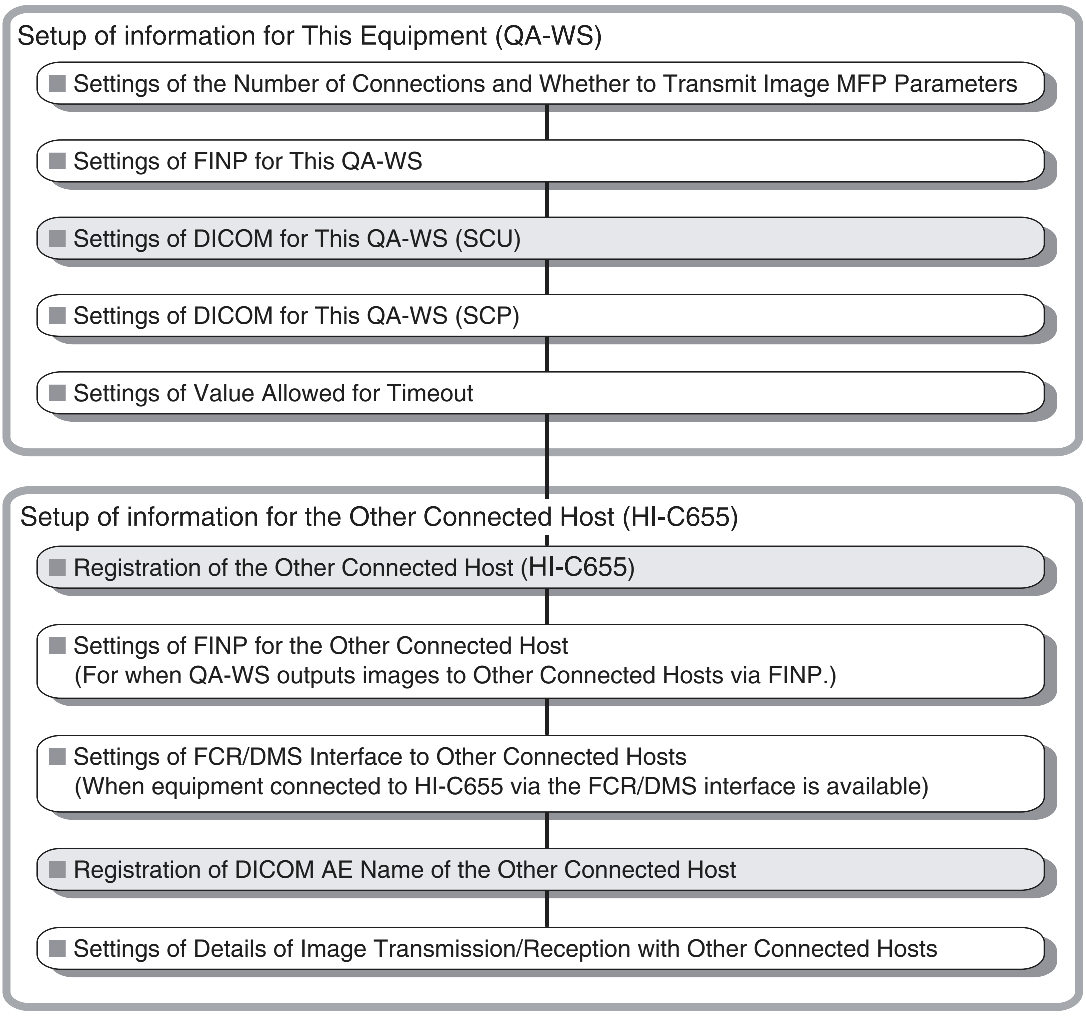
- HOST name : hic655a
- IP address : 172.16.0.21
- AE name (Provider) : hic655a-scp
- Port no. : 5001
- Service Class : CR Storage
- Transfer Syntax : JPEG LossLess

FR1B5300.EPS

Set the above first on QA-WS and then on HI-C655.

5.3.1 Settings on QA-WS

Illustrated below is the setup operation flow on QA-WS.


Setup of information for This Equipment (QA-WS)
■ Settings of the Number of Connections and Whether to Transmit Image MFP Parameters
■ Settings of FINP for This QA-WS
■ Settings of DICOM for This QA-WS (SCU)
■ Settings of DICOM for This QA-WS (SCP)
■ Settings of Value Allowed for Timeout
Setup of information for the Other Connected Host (HI-C655)
■ Registration of the Other Connected Host (HI-C655)
■ Settings of FINP for the Other Connected Host
(For when QA-WS outputs images to Other Connected Hosts via FINP.)
■ Settings of FCR/DMS Interface to Other Connected Hosts
(When equipment connected to HI-C655 via the FCR/DMS interface is available)
■ Registration of DICOM AE Name of the Other Connected Host
■ Settings of Details of Image Transmission/Reception with Other Connected Hosts

FR1B5301.EPS

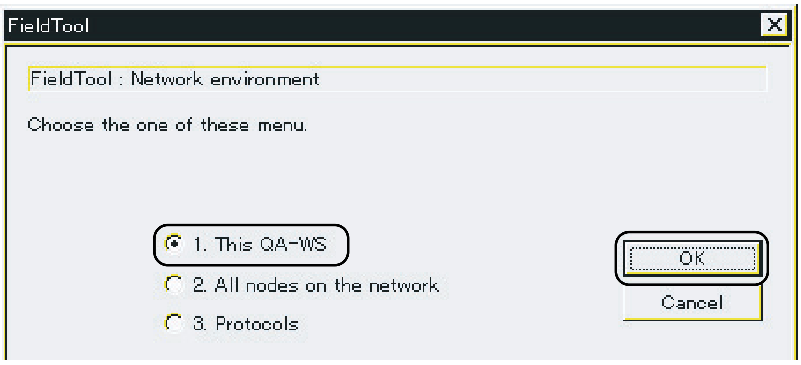
■ Settings of the Number of Connections and Whether to Transmit Image Processing Parameters

Set the following 2 items.

- Number of connections (the number of images that can be input/output at the same time)
- Whether or not to add image processing parameters to the image

(1) Select ○ 2. All nodes on the network on the FieldTool : Main Menu and click OK.
➔ The “FieldTool : Network environment” screen appears.

(2) Select ● 1. This QA-WS and click OK.



FieldTool : Network environment

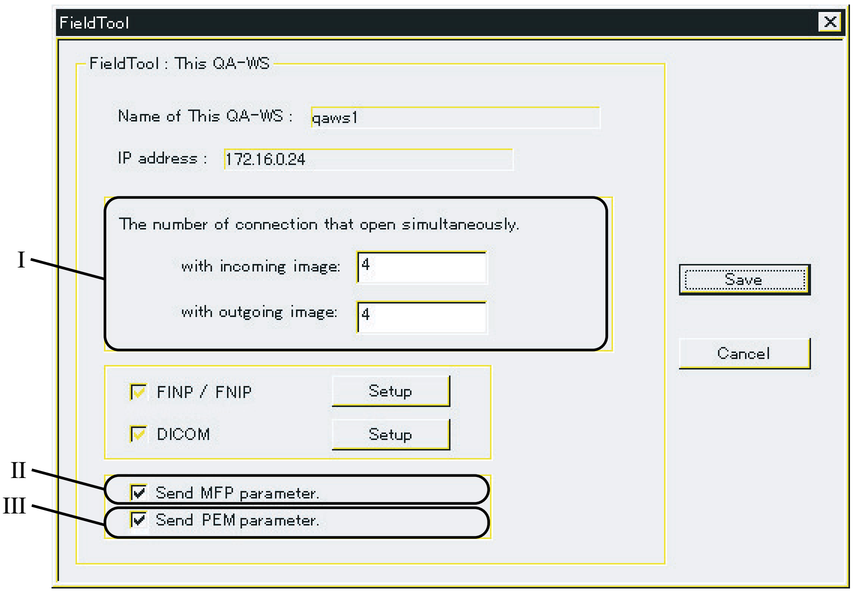
Choose the one of these menu.

- ● 1. This QA-WS
- ○ 2. All nodes on the network
- ○ 3. Protocols

FR1B5303.EPS

➔ The “FieldTool : This QA-WS” screen appears.

(3) Specify the number of connections and whether or not to transmit image processing parameters.



FieldTool : This QA-WS

Name of This QA-WS : qaws1

IP address : 172.16.0.24

The number of connection that open simultaneously.

with incoming image: 4

with outgoing image: 4

- ☑ FINP / FNIP
- ☑ DICOM
- ☑ Send MFP parameter.
- ☑ Send PEM parameter.

FR1B5320.EPS

I. Enter the number of connections (e.g.: 4 for both incoming and outgoing images) to be opened for inputting/outputting images.

◆◆ CAUTION ◆◆

Leave the number of images that can be input/output simultaneously (the number of connections) as is the default setting (4).

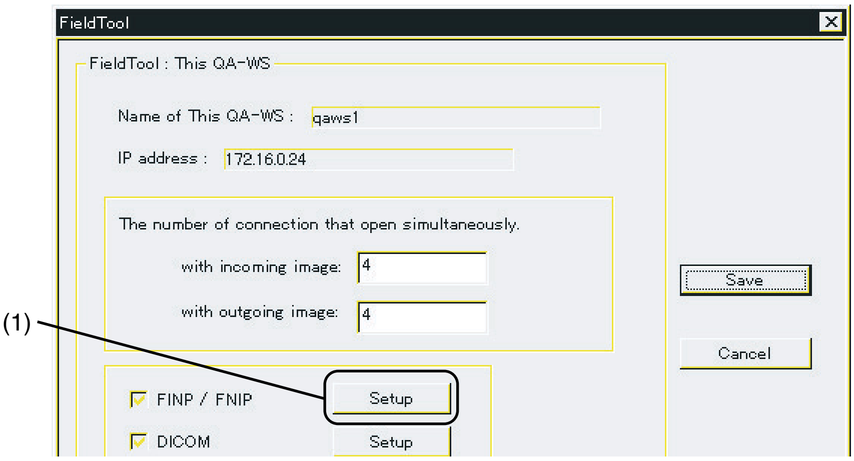
II. Click (☐ ➔ ☑) when transmitting MFP parameters to Other Connected Hosts.

III. Click (☐ ➔ ☑) when transmitting PEM parameters to Other Connected Hosts.

■ Settings of FINP for This QA-WS

Set FINP if, in This Equipment (QA-WS), there is equipment that communicates with each other via FINP.

(1) Click Setup of “FINP/FNIP” on the “FieldTool : QA-WS” screen.



Name of This QA-WS : qaws1

IP address : 172.16.0.24

The number of connection that open simultaneously.

with incoming image: 4

with outgoing image: 4

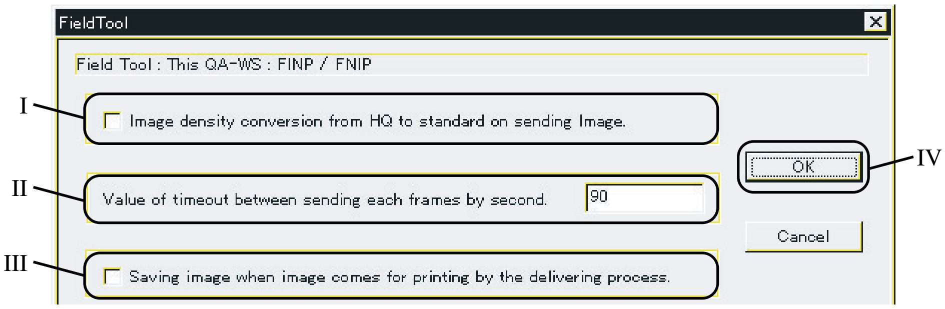
☑ FINP / FNIP

☑ DICOM

FR1B5321.EPS

➔ The “FieldTool : This QA-WS : FINP/FNIP” screen appears.

(2) Set FINP as follows.



☐ Image density conversion from HQ to standard on sending Image.

Value of timeout between sending each frames by second. 90

☐ Saving image when image comes for printing by the delivering process.

FR1B5322.EPS

I. Click (☐ ➔ ☑) when This QA-WS inputs images or when converting high quality images to standard images for transmission of images to Other Connected Hosts.

◆ NOTE ◆

- *Click (☐ ➔ ☑) if high quality images cannot be handled due to limitations of memory capacity, etc.*
- *Click (☐ ➔ ☑) if, on the connected networks, there is equipment that cannot handle high quality images or when transmitting standard images.*

II. Enter a value allowed for timeout that has been set (e.g.: 90) for transmitting multi-modality images.

◆ ***NOTE*** ◆

The time can be entered between 90 and 3600 sec. Basically leave as is the default (90 sec.).

III. Click when saving on the HDD of This QA-WS images that have been requested for print by Other Connected Hosts.

IV. Click OK.
➔ The display returns to the “FieldTool : This QA-WS” screen.

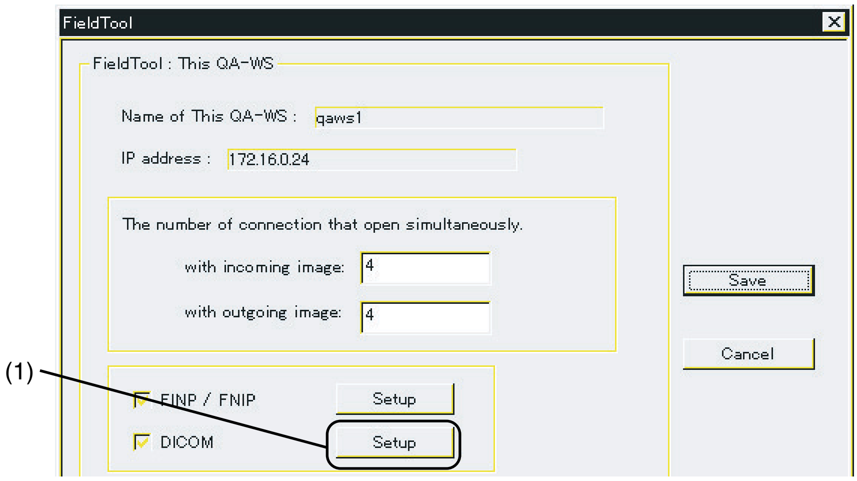
■ Settings of DICOM for This QA-WS (SCU)

This is to set the AE (Application Entity) when QA-WS is the SCU (Service Class User).

◆ *NOTE* ◆

These settings are possible only when the DICOM Key is installed.

(1) Click Setup of “DICOM” on the “FieldTool : This QA-WS” screen.


FieldTool
FieldTool : This QA-WS
The number of connection that open simultaneously.
Save
Cancel
Setup
Setup
(1)

Name of This QA-WS : qaws1

IP address : 172.16.0.24

with incoming image: 4

with outgoing image: 4

☑ FINP / FNIP

☑ DICOM

FR1B5304.EPS

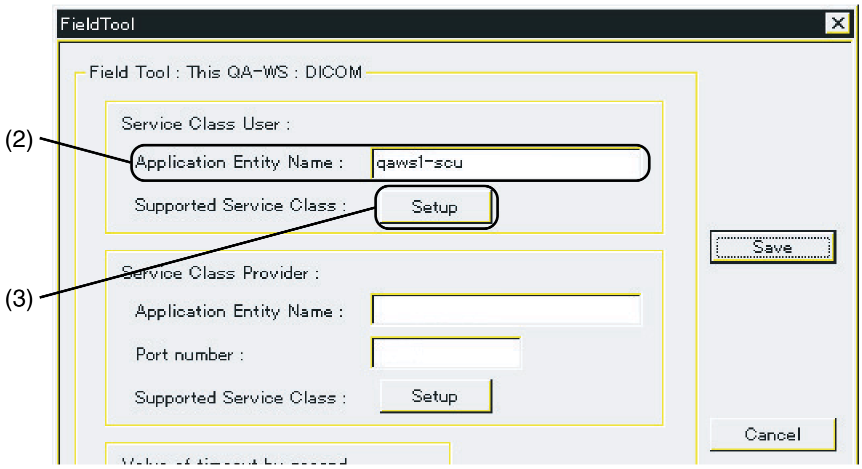
➔ The “FieldTool : This QA-WS : DICOM” screen appears.

(2) Enter the AE name (e.g.: qaws1-scu) when QA-WS is the SCU.

◆ *NOTE* ◆

- *Any name can be set as the AE name. However, do not use the same name that has already been used for other networked equipment.*
- *A maximum of 16 characters can be used for the AE name.*
- *The same name cannot be used for both the SCU and the SCP.*

(3) Click Setup.

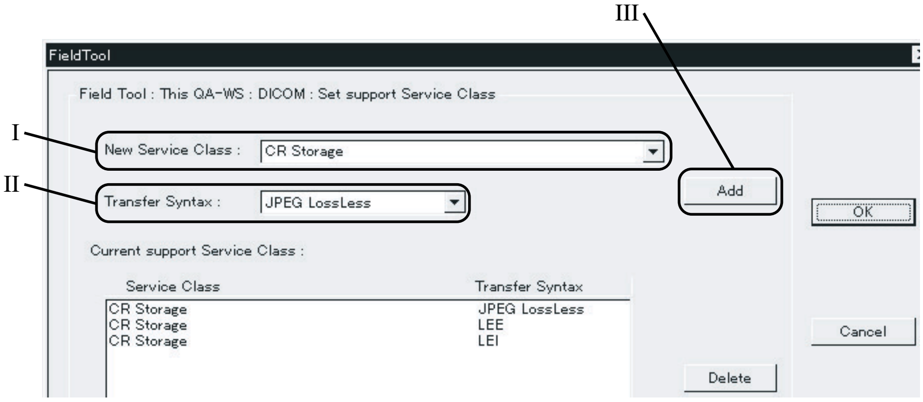

FieldTool
Field Tool : This QA-WS : DICOM
Service Class User :
Supported Service Class :
Setup
Service Class Provider :
Application Entity Name :
Port number :
Supported Service Class :
Setup
Save
Cancel
(2)
(3)

Application Entity Name : qaws1-scu

FR1B5305.EPS

➔ The “FieldTool : This QA-WS : DICOM : Set support Service Class” screen appears.

(4) Set the Service Class and Transfer Syntax.



Field Tool : This QA-WS : DICOM : Set support Service Class

New Service Class : CR Storage

Transfer Syntax : JPEG LossLess

Current support Service Class :

Service Class	Transfer Syntax
CR Storage	JPEG LossLess
CR Storage	LEE
CR Storage	LEI

FR1B5306.EPS

I. Select the Service Class (e.g.: CR Storage).
Any of the following can be selected as the Service Class.

- CR Storage
- Patient Root Q/R information model
- Study Root Q/R information model
- Print Service

II. Select the Transfer Syntax (e.g.: JPEG LossLess).
Any of the following can be selected as the Transfer Syntax.

- LEI (Implicit VR Little Endian)
- LEE (Explicit VR Little Endian)
- JPEG LossLess

The table below shows combinations of the Service Class and the Transfer Syntax that can be set for CR Storage and Verification of the SCU.

Service Class	**Transfer Syntax**		
	LEI	**LEE**	**JPEG LossLess**
CR Storage	○	○	○
Verification	○	×	×

TR1B5304.EPS

III. Click Add.

➔ The actually set content will be displayed in the “Current support Service Class” column.

◆ REFERENCE ◆

To delete the actually set content, select the item displayed in the “Current support Service Class” column and click Delete.

(5) To continuously set a multiple number of Service Classes and Transfer Syntax, repeat step (4) above.

(6) Click OK.

➔ The display returns to the “FieldTool : This QA-WS : DICOM” screen.

■ Settings of DICOM for This QA-WS (SCP)

This is to set the AE (Application Entity) when QA-WS is the SCP (Service Class Provider).

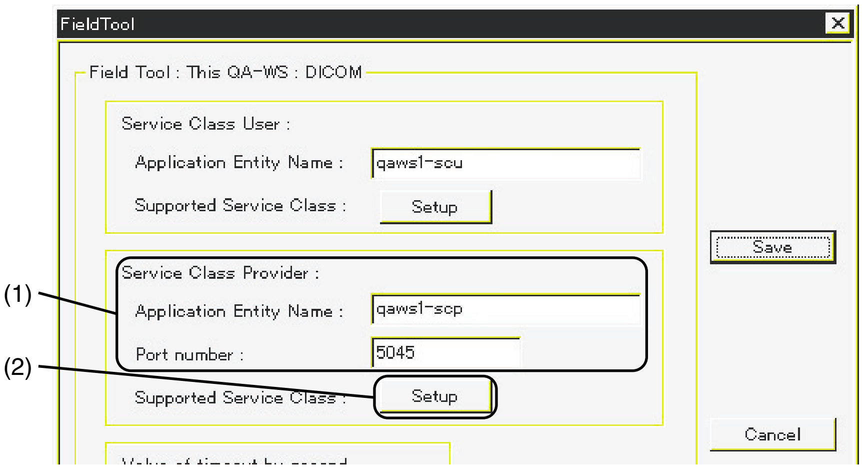
◆ NOTE ◆

These settings are possible only when the DICOM Key is installed.

(1) Enter the AE name (e.g.: qaws1) and the port no. (e.g.: 5001) when QA-WS is the SCP.

◆ NOTES ◆

- *Any name can be set as the AE name. However, do not use the same name that has already been used for other networked equipment.*
- *A maximum of 16 characters can be used for the AE name.*
- *The same name cannot be used for both the SCU and the SCP.*



Application Entity Name : qaws1-scu
Supported Service Class :
Application Entity Name : qaws1-scp
Port number : 5045
Supported Service Class :

FR1B5307.EPS

◆ NOTES ◆

- *Enter the port no. between 1 and 65535.*
- *Do not use port number 5000 for Windows XP because it is used by XP.*
- *Do not use the same port no. as that used for other networked equipment.*

(2) Click Setup.

➔ The “FieldTool : This QA-WS : DICOM : Set support Service Class” screen appears.

(3) Set the “Service Class” and the “Transfer Syntax” following the same procedures as those used in step (4) in “■ Settings of DICOM for This QA-WS (SCU)” above.

◆ *NOTE* ◆

The table below shows combinations of the Service Class and the Transfer Syntax that can be set for CR Storage of the SCP.

Service Class	**Transfer Syntax**		
	LEI	**LEE**	**JPEG LossLess**
CR Storage	○	○	○

TR1B5300.EPS

(4) Click OK.
➔ The display returns to the “FieldTool : This QA-WS : DICOM” screen.

■ Settings of Value Allowed for Timeout

Set the value of timeout between DICOM messages and between Packets.

(1) Set the following for the “Value of timeout by second” column on the “FieldTool : This QA-WS : DICOM” screen.
- DIMSE : 300
- Packet : 300

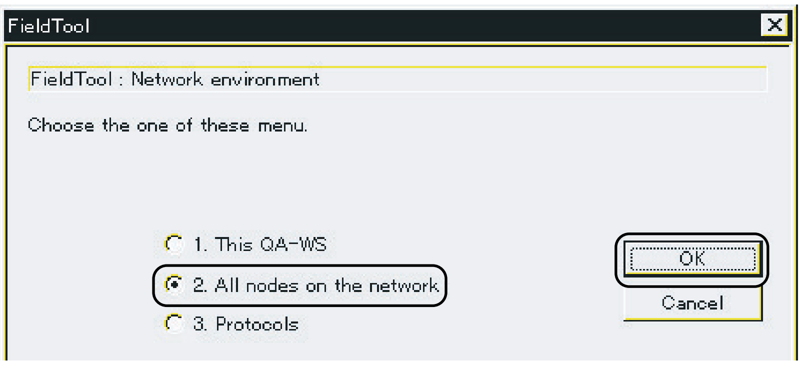
(2) Click Save.
➔ Items set will thus be saved and the display returns to the “FieldTool : This QA-WS” screen.

(3) Click Save.
➔ The display returns to the “FieldTool : Network environment” screen.

■ Registration of the Other Connected Host (HI-C655)

Enter the host name and the IP address for registering the Other Connected Host (e.g.: HI-C655) to QA-WS.

(1) Select ● 2. All nodes on the network on the “FieldTool : Network environment” screen and click OK.



FieldTool

FieldTool : Network environment

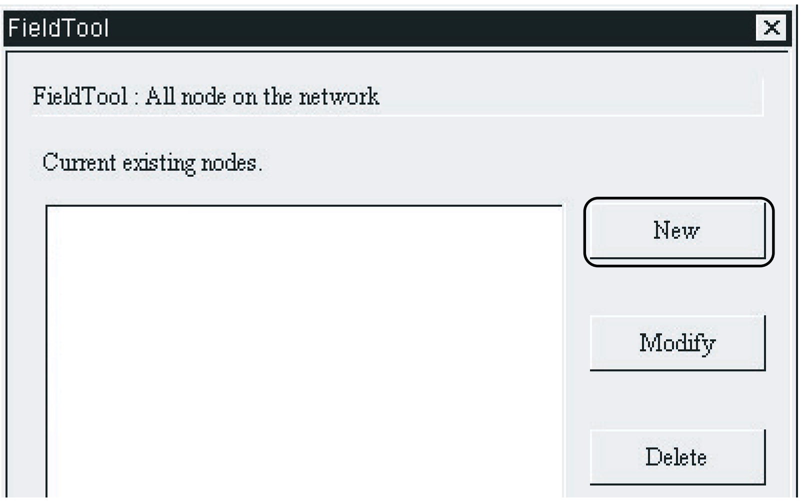
Choose the one of these menu.

○ 1. This QA-WS
● 2. All nodes on the network
○ 3. Protocols

FR1B5308.EPS

➔ The list of host names included in the “FieldTool : All nodes on the network” dialog box appears.

(2) Click New.



FieldTool

FieldTool : All node on the network

Current existing nodes.

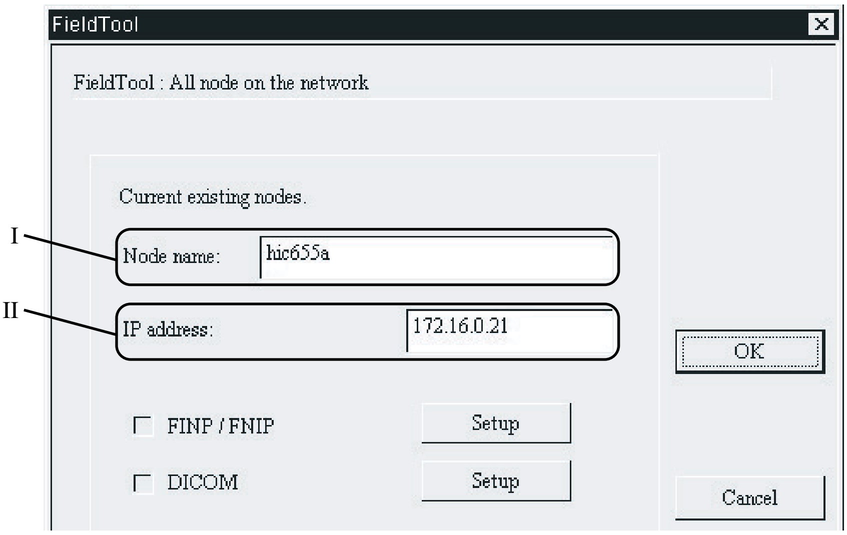
FR1B5309.EPS

◆ REFERENCE ◆

- *The list presents host names of the equipment already registered.*
- *To change the set content of the equipment, select the host name and then click* Modify.
- *To delete equipment already registered, select the host name and then click* Delete.

➔ “FieldTool : All nodes on the network” setting screen appears.

(3) Enter the host name and the IP address of the Other Connected Host.



FieldTool : All node on the network

Current existing nodes.

Node name: hic655a

IP address: 172.16.0.21

FR1B5310.EPS

I. Enter the host name (e.g.: hic655a) in the "Node name" column.

◆ ***REFERENCE*** ◆

A maximum of 20 alphanumerics and hyphens ("-") can be entered for the host name.

II. Enter the IP address (e.g.: 172.16.0.21) in the "IP address" column.

■ Settings of FINP for the Other Connected Host (For when QA-WS outputs images to Other Connected Hosts via FINP.)

Presented below are setting procedures for QA-WS to output images to Other Connected Hosts via FINP.

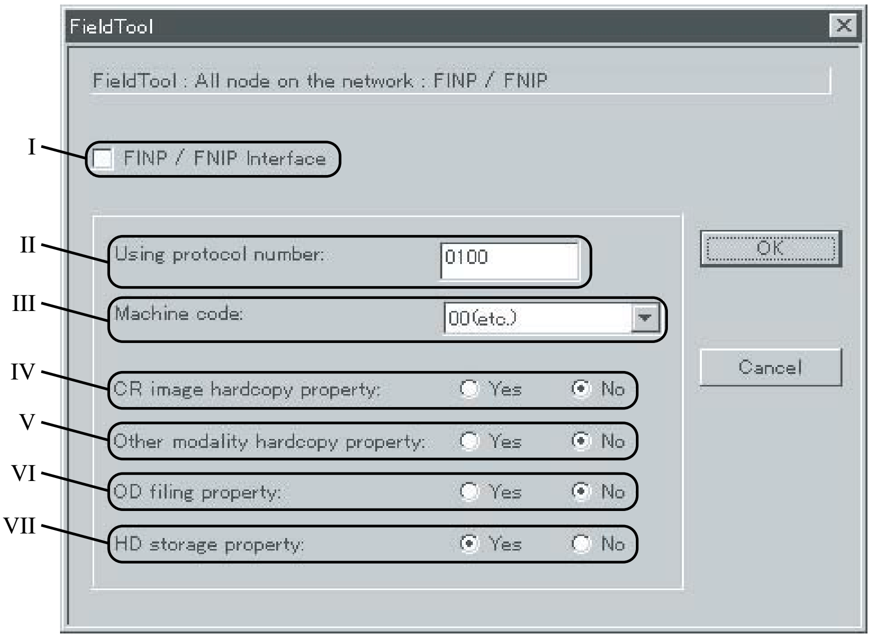
◆ NOTE ◆

If both FINP and DICOM have been specified, DICOM will be used prevailingly.

(1) Click Setup of “FINP/FNIP” on the “FieldTool : All nodes on the network” setting screen.

➔ The “FieldTool : All nodes on the network : FINP/FNIP” screen appears.

(2) Set FINP as follows.



FieldTool

FieldTool : All node on the network : FINP / FNIP

☐ FINP / FNIP Interface

Using protocol number: 0100

Machine code: 00(etc.)

CR image hardcopy property: ○ Yes ● No

Other modality hardcopy property: ○ Yes ● No

OD filing property: ○ Yes ● No

HD storage property: ● Yes ○ No

FR1B5311.EPS

I. Check (☐ ➔ ☑) if FINP/FNIP is used.

II. Enter the protocol ID number (e.g.: 0100) used by the Other Connected Host.
The following ID numbers can be used.
0001 : HIC654 (– A06), ODF613, ODF623
0100 : HIC654 (A07 – , E –), DICOM G/W, MF-300L,
Print Server, NIU, File Server, ODF614, ODF624

◆ NOTE ◆

To enable the image processing selection flag, enter “0110”.
Make sure however that the Other Connected Host to which images are transferred is available for FINP0110.

III. From the table below, select the device code (e.g.: 00) for identifying Other Connected Hosts.

Device Name	Device Code	Device Name	Device Code
5000	D1	ODF614/624	00
5000R	D2	FN -PS551	00
5501	D8	CR-DM666	00
HIC654	00	MF-300L	00
ODF613/623	00	DM-FS665	00

TR1B5301.EPS

IV. Select ○ Yes when the Other Connected Host is the image reader.

V. Select ○ Yes when the Other Connected Host is the FM-series device.

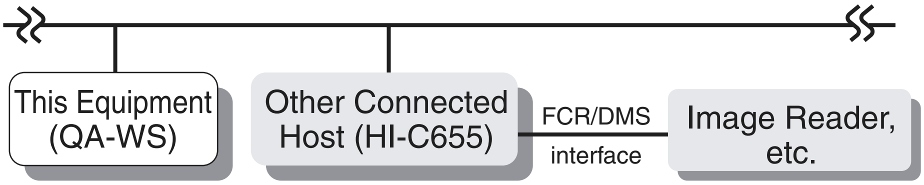
VI. Select ○ Yes when the Other Connected Host is the ODF-series device.

VII. Select ○ Yes when the Other Connected Host is the HIC-series device.

(3) Click OK.
➔ The display returns to the “FieldTool : All nodes on the network” setting screen.

■ Settings of FCR/DMS Interface to Other Connected Hosts (When equipment connected to HI-C655 via the FCR/DMS interface is available.)

Described herein are procedures when equipment connected to the Other Connected Host (HI-C655) via the FCR/DMS interface is available, as illustrated below.

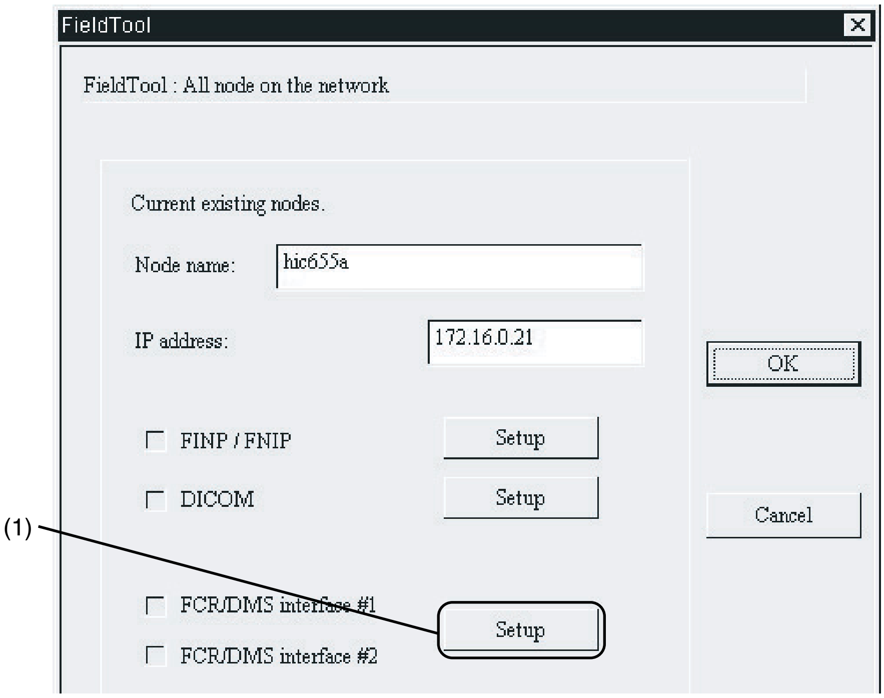

This Equipment (QA-WS)
Other Connected Host (HI-C655)
FCR/DMS interface
Image Reader, etc.

FR1B5302.EPS

◆ ***REFERENCE*** ◆

If no equipment is connected to the Other Connected Host, proceed to "n Registration of DICOM AE Name of the Other Connected Host".

(1) Click Setup of the "FCR/DMS interface" dialog.


FieldTool

FieldTool : All node on the network

Current existing nodes.

Node name: hic655a

IP address: 172.16.0.21

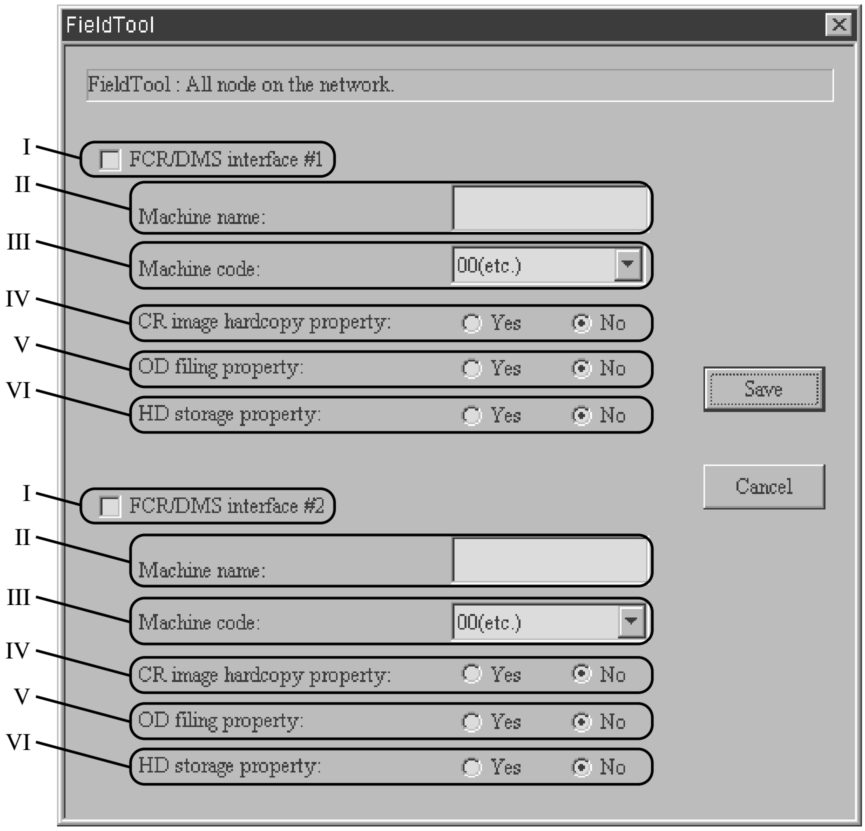
☐ FINP / FNIP
☐ DICOM
☐ FCR/DMS interface #1
☐ FCR/DMS interface #2

Setup
Setup
Setup
OK
Cancel
(1)

FR1B5312.EPS

➔ The "FCR/DMS interface" setting screen of "FieldTool : All nodes on the network" appears.

(2) Set nodes connected to the Other Connected Host.



FieldTool : All node on the network.

☐ FCR/DMS interface #1

Machine name:

Machine code: 00(etc.)

CR image hardcopy property: ○ Yes ● No

OD filing property: ○ Yes ● No

HD storage property: ○ Yes ● No

☐ FCR/DMS interface #2

Machine name:

Machine code: 00(etc.)

CR image hardcopy property: ○ Yes ● No

OD filing property: ○ Yes ● No

HD storage property: ○ Yes ● No

FR1B5313.EPS

I	No. of connections	When 1 node is connected : Check #1. When 2 nodes are connected : Check both #1 and #2.
II	Equipment name	E.g.: FCR9000A
III	Equipment code	E.g.: B1
IV	Equipment type (Image Reader)	E.g.: Yes
V	Equipment type (ODF)	E.g.: No
VI	Equipment type (HIC)	E.g.: No

TR1B5305.EPS

Following are the equipment codes used.

Device Name	Device Code	Device Name	Device Code
ODF613	A0	AC-3	B3
CR7000	A1	IPU515	B4
HIC652	A2	CR9501	B5
CR7501	A3	CR9502	B7
7000M	A4	9501ES	B9
7000D	A5	5000	D1
7501S	A6	5000R	D2
AC -2	AC	5501	D8
IPU514	AE	DR11WT	FD
FCR502	52	DR11W	FE
CR9000	B1	MODEM	FF

TR1B5302.EPS

◆ ***NOTE*** ◆

Set “00” for equipment not listed in the table above.

(3) Click Save.

➔ The display returns to the “FieldTool : All nodes on the network” setting screen.

■ Registration of DICOM AE Name of the Other Connected Host

Register the AE (Application Entity) name of the Other Connected Host.

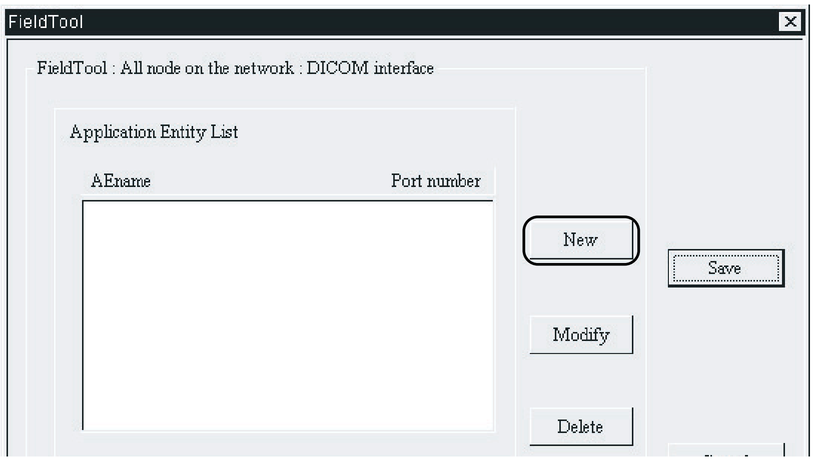
◆ *NOTE* ◆

- *If both FINP and DICOM have been specified, DICOM will be used prevailingly.*
- *Do not apply the DICOM setup for the workstation that is searched by other workstations. The DICOM protocol does not work for searching/retrieving the FCR image data. Only FINP supports the image data searching and retrieving.*
- *A maximum of 100 AE names can be registered.*

(1) Click Setup of “DICOM” on the “FieldTool : All nodes on the network” setting screen.

➔ The “FieldTool : All nodes on the network : DICOM interface” screen appears.

(2) Click New.


FieldTool
FieldTool : All node on the network : DICOM interface
Application Entity List
AEname
Port number
New
Save
Modify
Delete

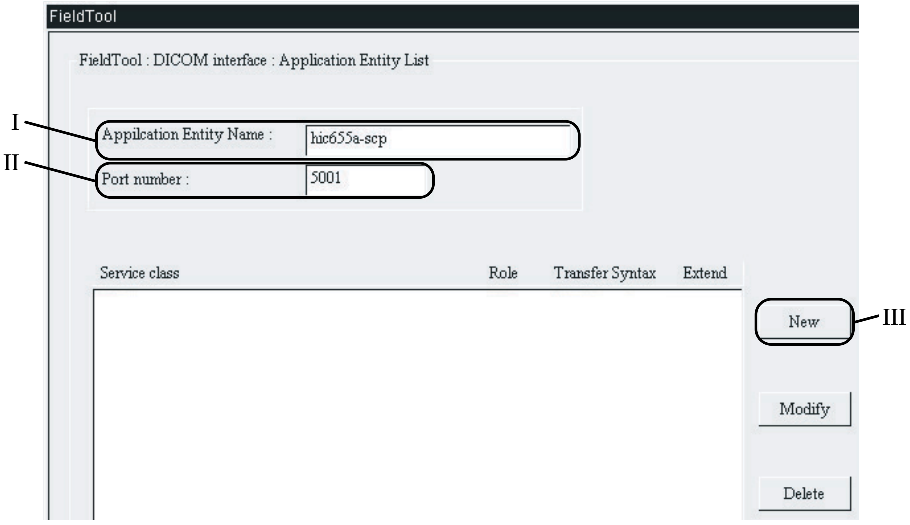
FR1B5314.EPS

◆ *REFERNCE* ◆

- *The list presents already registered AEs if any.*
- *To change set content, select the AE name and click* Modify.
- *To delete the AE name, select the AE name and click* Delete.

➔ The “FieldTool : DICOM interface : Application Entity List” screen appears.

(3) Enter the AE name and the port number of the Other Connected Host.



FieldTool

FieldTool : DICOM interface : Application Entity List

Appilcation Entity Name : hic655a-scp

Port number : 5001

FR1B5315.EPS

◆ REFERENCE ◆

The list presents already registered Service Classes.

I. Enter in the “Application Entity Name” column the AE name (e.g.: hic655a-scp) used by the Other Connected Host.

II. Enter in the “Port number” column the port number (e.g.: 5001) used by the Other Connected Host.

◆ NOTE ◆

- *Enter the port number between 1 and 65535, in accordance with settings of the Other Connected Host.*
- *Do not use the same port number that has already been used for other networked equipment.*

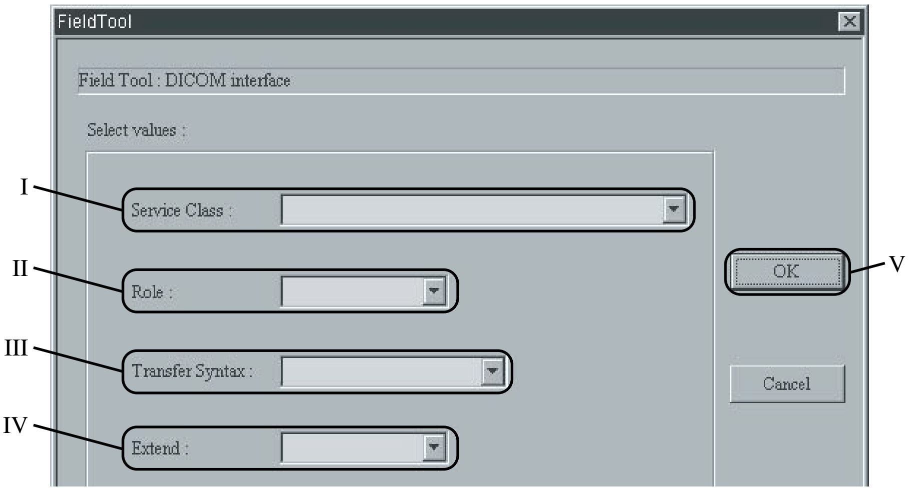
III. Click New.

➔ The “FieldTool : DICOM interface” screen appears.

◆ REFERENCE ◆

- *To change set content, select the Service Class and click* Modify.
- *To delete the Service Class, select the Service Class and click* Delete.

(4) On the “FieldTool : DICOM interface” screen below, set the Service Class and the Transfer Syntax.


FieldTool
Field Tool : DICOM interface
Select values :
Service Class :
Role :
Transfer Syntax :
Extend :
OK
Cancel
I
II
III
IV
V

FR1B5316.EPS

I. Select the Service Class (e.g.: CR Storage).
Any of the following can be selected as the Service Class.

- CR Storage
- Patient Root Q/R information model
- Study Root Q/R information model
- Verification
- Print Service

II. Select the Role (e.g.: SCP).

III. Select the Transfer Syntax (e.g.: JPEG LossLess).
Any of the following can be selected as the Transfer Syntax.

- LEI (implicit VR Little Endian)
- LEE (Explicit VR Little Endian)
- JPEG LossLess

◆ *NOTE* ◆

Do not set Service Classes or Transfer Syntax other than the above, because This HI-C655 does not supports them even though the Other Connected Host does.

IV. Select Yes or No for the Extend function.

◆ *NOTE* ◆

The above settings are possible individually. However, due to the relation with respect to the Service Class, those settings cannot be possible depending on the combinations listed in the table below.

Service Class	Role	Transfer Syntax
CR Storage	SCU&SCP	All (LEI, LEE, JPEG) possible
Verification	SCU	Possible only with LEI
Verification	SCP	All impossible (Verification not possible with the SCP)
Print Service	SCP	Possible only with LEI

TR1B5307.EPS

V. Click OK.

➔ The display returns to the "FieldTool : DICOM interface : Application Entity List" screen.

(5) To set a multiple number of Service Class or Transfer Syntax continuously, repeat steps (3) and (4).

(6) Click OK.

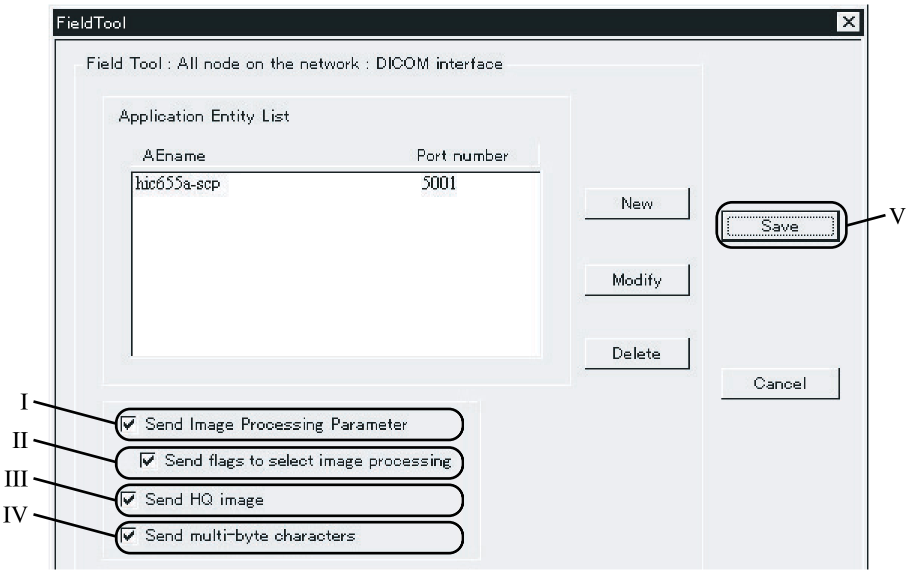
➔ The display returns to the "FieldTool : All nodes on the network : DICOM interface" screen.

(7) To set a multiple number of AE name continuously, repeat steps (2) to (6).

■ Settings of Details of Image Transmission/Reception with Other Connected Hosts

Specify processing to be done on images for transmission/reception.

(1) On the “FieldTool : All nodes on the network : DICOM interface” screen, specify processing to be done on images.


FieldTool

Field Tool : All node on the network : DICOM interface

Application Entity List

AEname	Port number
hic655a-scp	5001

☑ Send Image Processing Parameter
☑ Send flags to select image processing
☑ Send HQ image
☑ Send multi-byte characters

FR1B5317.EPS

I. If this dialog box is checked (☐ ➔ ☑), the image processing parameter will be attached to the data for transmission, when an image is transmitted using “Private CR Storage”.

◆ *NOTE* ◆

This setting is enabled only when the Private DICOM Key has been installed.

II. Select whether or not to add image processing selection flag to the image processing parameter (☑: add, ☐: not to add).

III. If this dialog box is checked (☐ ➔ ☑), high quality images will be transmitted as they are, with no image quality conversion done.
If not checked, high quality images will be subjected to GS conversion making those images converted to standard images and then transmitted. Images of modality other than the CR will not be converted to standard images.

IV. If this dialog box is checked (☐ ➔ ☑), Multi-Byte characters will be transmitted.

V. Click Save.
➔ The display returns to the “FieldTool : All nodes on the network” setting screen.

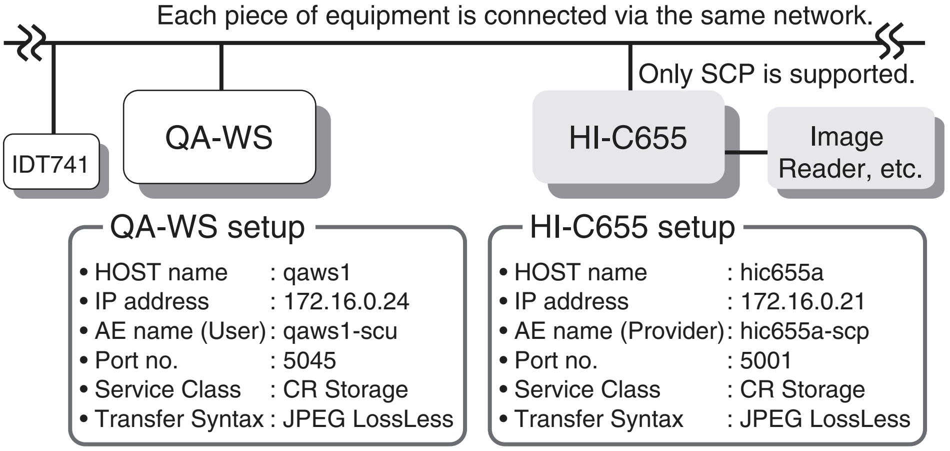
(2) Click OK.
➔ The display returns to the host name list screen on “FieldTool : All nodes on the network”.

(3) To make the same settings for a multiple number of equipment, repeat step (2) of “■ Registration of the Other Connected Host (HI-C655)” – step (2) of “■ Settings of Details of Image Transmission/Reception with Other Connected Hosts”.

(4) Click Save of the host name list screen on “FieldTool : All nodes on the network”.
➔ The display returns to the “FieldTool : Network environment” screen.
This completes setup of QA-WS. Setup of HI-C655 then follows.

5.3.2 Settings on HI-C655

After completing setups on QA-WS, proceed now to setups on HI-C655.

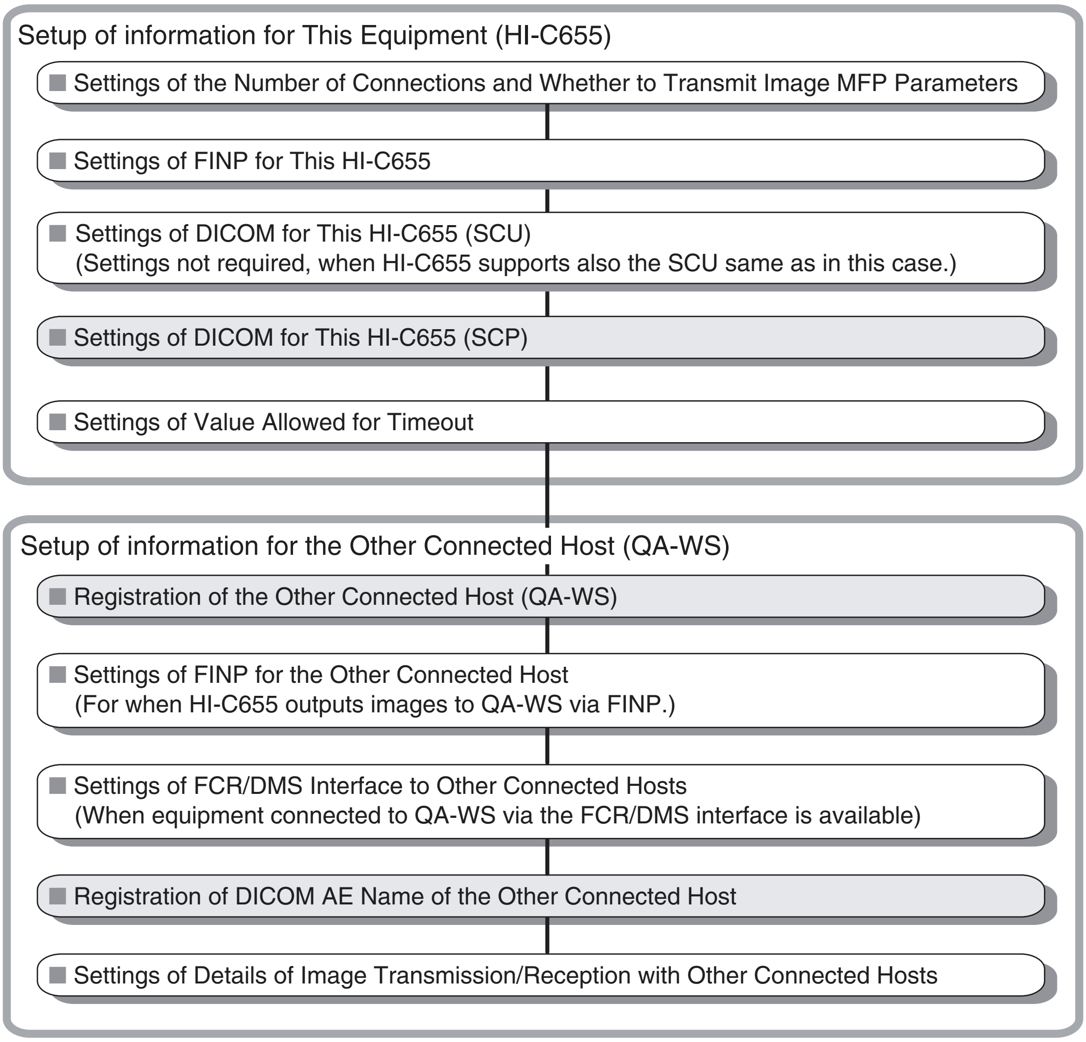

Each piece of equipment is connected via the same network.
Only SCP is supported.
IDT741
QA-WS
HI-C655
Image Reader, etc.

QA-WS setup
- HOST name : qaws1
- IP address : 172.16.0.24
- AE name (User) : qaws1-scu
- Port no. : 5045
- Service Class : CR Storage
- Transfer Syntax : JPEG LossLess

HI-C655 setup
- HOST name : hic655a
- IP address : 172.16.0.21
- AE name (Provider) : hic655a-scp
- Port no. : 5001
- Service Class : CR Storage
- Transfer Syntax : JPEG LossLess

FR1B5329.EPS

Illustrated below is the setup operation flow on HI-C655.


Setup of information for This Equipment (HI-C655)
■ Settings of the Number of Connections and Whether to Transmit Image MFP Parameters
■ Settings of FINP for This HI-C655
■ Settings of DICOM for This HI-C655 (SCU) (Settings not required, when HI-C655 supports also the SCU same as in this case.)
■ Settings of DICOM for This HI-C655 (SCP)
■ Settings of Value Allowed for Timeout
Setup of information for the Other Connected Host (QA-WS)
■ Registration of the Other Connected Host (QA-WS)
■ Settings of FINP for the Other Connected Host (For when HI-C655 outputs images to QA-WS via FINP.)
■ Settings of FCR/DMS Interface to Other Connected Hosts (When equipment connected to QA-WS via the FCR/DMS interface is available)
■ Registration of DICOM AE Name of the Other Connected Host
■ Settings of Details of Image Transmission/Reception with Other Connected Hosts

FR1B5323.EPS

■ Settings of the Number of Connections and Whether to Transmit Image Processing Parameters

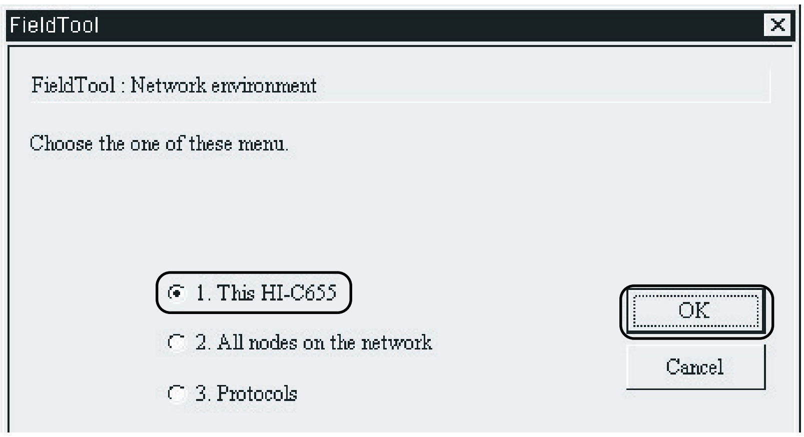
Set the following 2 items.

- Number of connections (the number of images that can be input/output at the same time)
- Whether or not to add image processing parameters to the image

(1) Select ○ 2. All nodes on the network on the FieldTool : Main Menu and click OK.

➔ The “FieldTool : Network environment” screen appears.

(2) Select ● 1. This HI-C655 and click OK.



FieldTool

FieldTool : Network environment

Choose the one of these menu.

● 1. This HI-C655

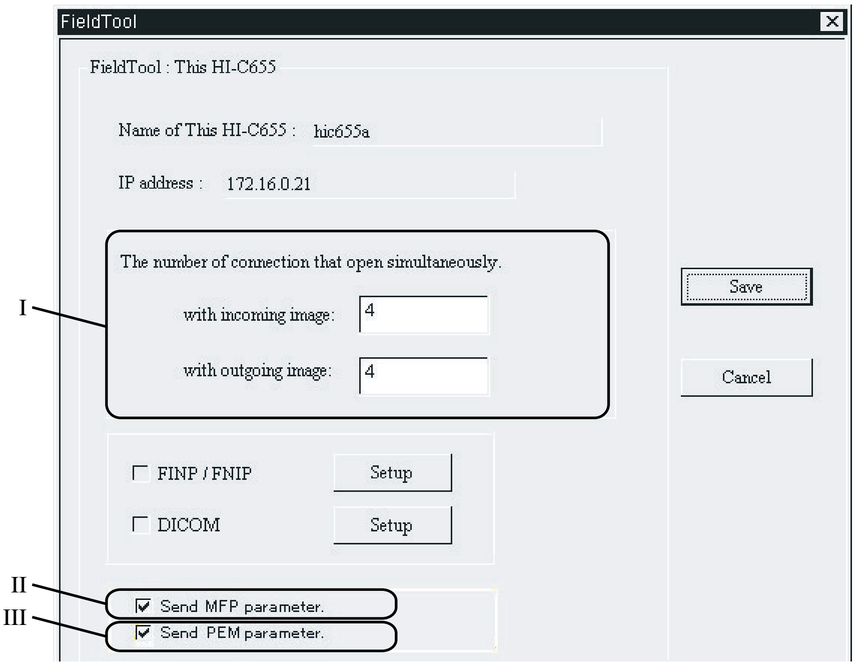
○ 2. All nodes on the network

○ 3. Protocols

FR1B5379.EPS

➔ The “FieldTool : This HI-C655” screen appears.

(3) Specify the number of connections and whether or not to transmit image processing parameters.



FieldTool

FieldTool : This HI-C655

Name of This HI-C655 : hic655a

IP address : 172.16.0.21

The number of connection that open simultaneously.

with incoming image: 4

with outgoing image: 4

☐ FINP / FNIP

☐ DICOM

☑ Send MFP parameter.

☑ Send PEM parameter.

FR1B5333.EPS

I. Enter the number of connections (e.g.: 4 for both incoming and outgoing images) to be opened for inputting/outputting images.

◆◆ *CAUTION* ◆◆

Leave the number of images that can be input/output simultaneously (the number of connections) as is the default setting (4).

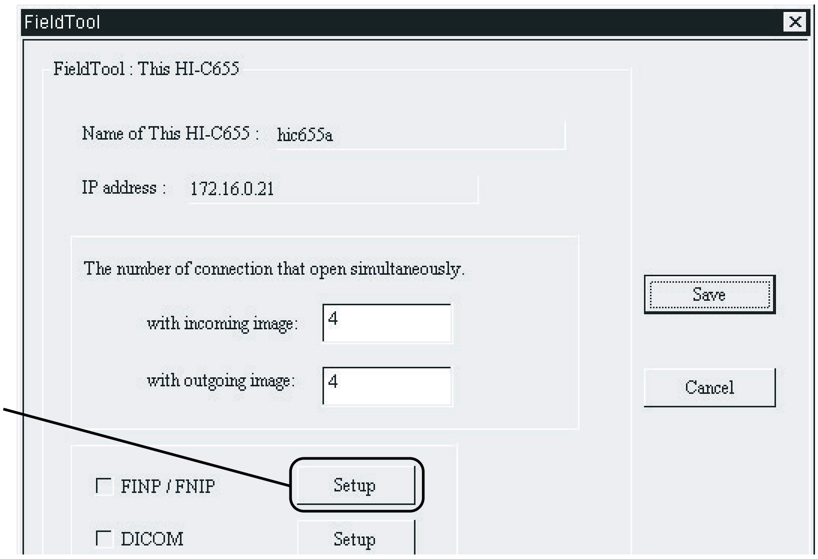
II. Check (☐ ➔ ☑) when transmitting MFP parameters to Other Connected Hosts.

III. Check (☐ ➔ ☑) when transmitting PEM parameters to Other Connected Hosts.

■ Settings of FINP for This HI-C655

Set FINP if, in This HI-C655, there is equipment that communicates with each other via FINP.

(1) Click Setup of "FINP/FNIP" on the "FieldTool : This HI-C655" screen.



FieldTool : This HI-C655

Name of This HI-C655 : hic655a

IP address : 172.16.0.21

The number of connection that open simultaneously.

with incoming image: 4

with outgoing image: 4

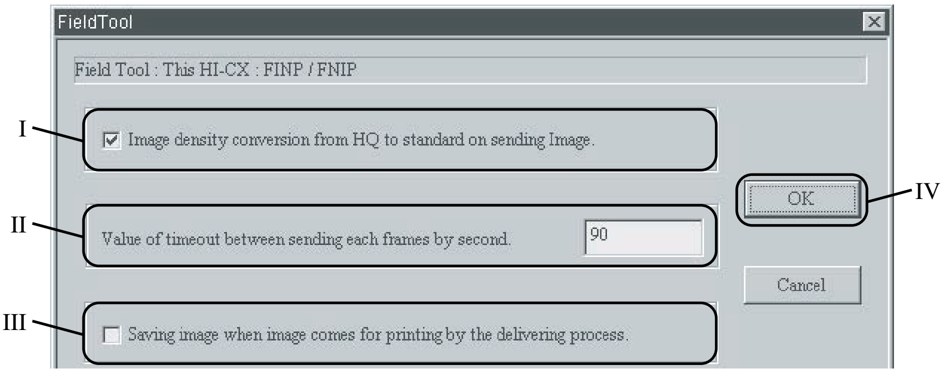
☐ FINP / FNIP

☐ DICOM

FR1B5332.EPS

➔ The "FieldTool : This HI-C655 : FINP/FNIP" screen appears.

(2) Set FINP as follows.



Field Tool : This HI-CX : FINP / FNIP

☑ Image density conversion from HQ to standard on sending Image.

Value of timeout between sending each frames by second. 90

☐ Saving image when image comes for printing by the delivering process.

FR1B5380.EPS

I. Check (☐ ➔ ☑) when This HI-C655 inputs images or when converting high quality images to standard images for transmission of images to Other Connected Hosts.

◆ *NOTE* ◆

- *Check (☐ ➔ ☑) if high quality images cannot be handled due to limitations of memory capacity, etc., when the control unit is configured as the viewer.*
- *Check (☐ ➔ ☑) if, on the connected networks, there is equipment that cannot handle high quality images or when transmitting standard images.*

II. Enter a value allowed for timeout that has been set (e.g.: 90) for transmitting multi-modality images.

◆ NOTE ◆

The time can be entered between 90 and 3600 sec. Basically leave as is the default (90 sec.).

III. Click when saving on the HDD of This HI-C655 images that have been requested for print by Other Connected Hosts.

◆ NOTE ◆

This setting is effective when This HI-C655 is the Master HIC.

IV. Click OK.
➔ The display returns to the “FieldTool : This HI-C655” screen.

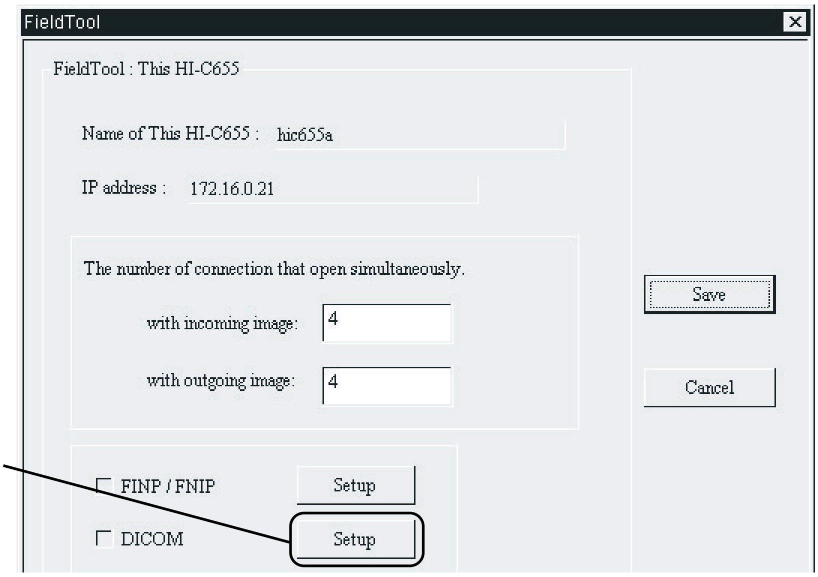
■ Settings of DICOM for This HI-C655 (SCU) (Settings not required, when HI-C655 supports also the SCU same as in this case.)

This is to set the AE (Application Entity) when HI-C655 is the SCU (Service Class User).

◆ *Noteu*◆

These settings are possible only when the DICOM Key is installed.

(1) Click Setup of “DICOM” on the “FieldTool : This HI-C655” screen.



Name of This HI-C655 : hic655a

IP address : 172.16.0.21

The number of connection that open simultaneously.

with incoming image: 4

with outgoing image: 4

FR1B5334.EPS

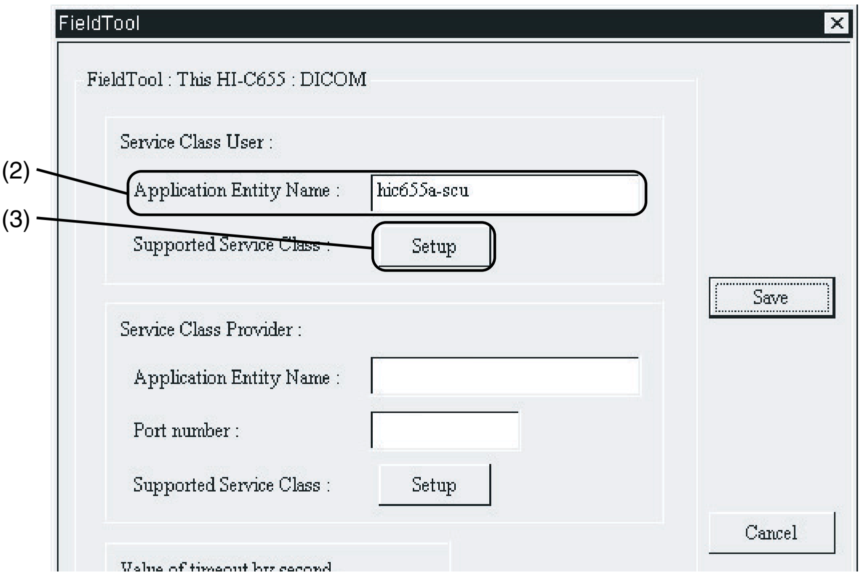
➔ The “FieldTool : This HI-C655 : DICOM” screen appears.

(2) Enter the AE name (e.g.: hic655a-scu) when HI-C655 is the SCU.

◆ NOTE ◆

- *Any name can be set as the AE name. However, do not use the same name that has already been used for other networked equipment.*
- *A maximum of 16 characters can be used for the AE name.*
- *The same name cannot be used for both the SCU and the SCP.*

(3) Click Setup .

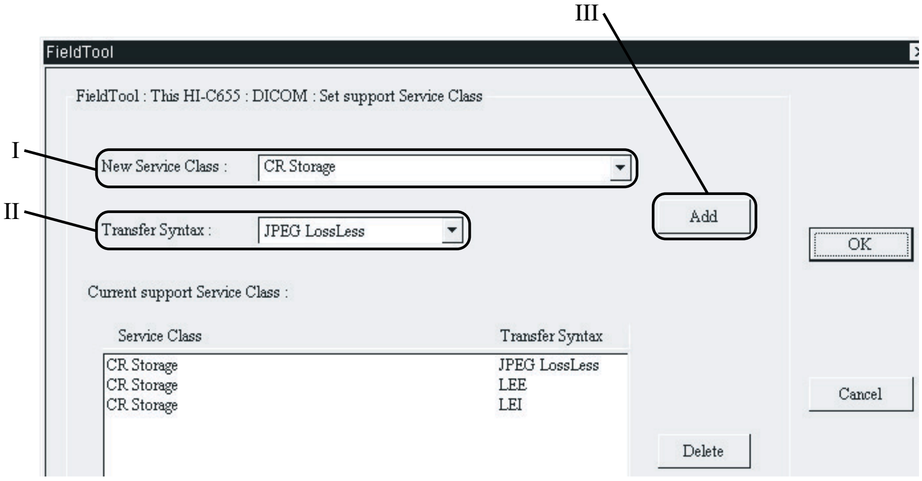

FieldTool
FieldTool : This HI-C655 : DICOM
Service Class User :
Application Entity Name :
Supported Service Class :
Setup
Save
Service Class Provider :
Application Entity Name :
Port number :
Supported Service Class :
Setup
Cancel
Value of timeout by second
(2)
(3)

Application Entity Name : hic655a-scu

FR1B5324.EPS

➔ The “FieldTool : This HI-C655 : DICOM : Set support Service Class” screen appears.

(4) Set the Service Class and Transfer Syntax.


FieldTool
FieldTool : This HI-C655 : DICOM : Set support Service Class
Add
OK
Current support Service Class :
Cancel
Delete
I
II
III

New Service Class : CR Storage

Transfer Syntax : JPEG LossLess

Service Class	Transfer Syntax
CR Storage	JPEG LossLess
CR Storage	LEE
CR Storage	LEI

FR1B5378.EPS

I. Select the Service Class (e.g.: CR Storage).
Any of the following can be selected as the Service Class.

- CR Storage
- Patient Root Q/R information model
- Study Root Q/R information model

II. Select the Transfer Syntax (e.g.: JPEG LossLess).
Any of the following can be selected as the Transfer Syntax.

- LEI (Implicit VR Little Endian)
- LEE (Explicit VR Little Endian)
- JPEG LossLess

The table below shows combinations of the Service Class and the Transfer Syntax that can be set for CR Storage and Verification of the SCU.

Service Class	**Transfer Syntax**		
	LEI	**LEE**	**JPEG LossLess**
CR Storage	○	○	○
Verification	○	×	×

TR1B5304.EPS

III. Click Add .
➔ The actually set content will be displayed in the “Current support Service Class” column.

◆ *REFERENCE* ◆

To delete the actually set content, select the item displayed in the “Current support Service Class” column and click Delete *.*

(5) To continuously set a multiple number of Service Classes and Transfer Syntax, repeat step (4) above.

(6) Click OK .
➔ The display returns to the “FieldTool : This HI-C655 : DICOM” screen.

■ Settings of DICOM for This HI-C655 (SCP)

This is to set the AE (Application Entity) when HI-C655 is the SCP (Service Class Provider).

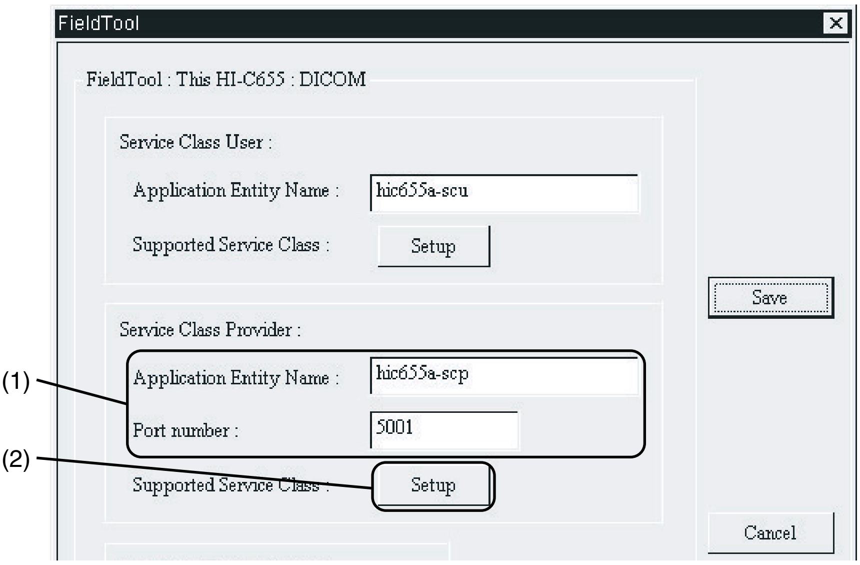
◆ NOTE ◆

These settings are possible only when the DICOM Key is installed.

(1) Enter the AE name (e.g.: hic655a-scp) and the port no. (e.g.: 5001) when HI-C655 is the SCP.

◆ NOTE ◆

- *Any name can be set as the AE name. However, do not use the same name that has already been used for other networked equipment.*
- *A maximum of 16 characters can be used for the AE name.*
- *The same name cannot be used for both the SCU and the SCP.*



FieldTool : This HI-C655 : DICOM

Service Class User :

Application Entity Name : hic655a-scu

Service Class Provider :

Application Entity Name : hic655a-scp

Port number : 5001

FR1B5325.EPS

◆ NOTE ◆

- *Enter the port no. between 1 and 65535.*
- *Do not use the same port no. as that used for other networked equipment.*

(2) Click Setup.

➔ The “FieldTool : This HI-C655 : DICOM : Set support Service Class” screen appears.

(3) Set the “Service Class” and the “Transfer Syntax” following the same procedures as those used in step (4) in “■ Settings of DICOM for This HI-C655 (SCU)” above.

◆ *NOTE* ◆

The table below shows combinations of the Service Class and the Transfer Syntax that can be set for CR Storage of the SCP.

Service Class	**Transfer Syntax**		
	LEI	**LEE**	**JPEG LossLess**
CR Storage	○	○	○

TR1B5300.EPS

(4) Click OK.
➔ The display returns to the “FieldTool : This HI-C655 : DICOM” screen.

■ Settings of Value Allowed for Timeout

Set the value of timeout between DICOM messages and between Packets.

(1) Set the following for the “Value of timeout by second” column on the “FieldTool : This HI-C655 : DICOM” screen.
- DIMSE : 300
- Packet : 300

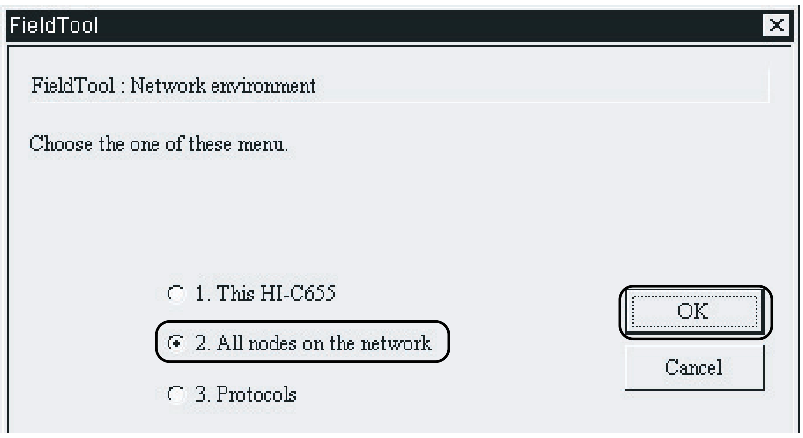
(2) Click Save.
➔ Items set will thus be saved and the display returns to the “FieldTool : This HI-C655” screen.

(3) Click Save.
➔ The display returns to the “FieldTool : Network environment” screen.

■ Registration of the Other Connected Host (QA-WS)

Enter the host name and the IP address for registering the Other Connected Host (e.g.: QA-WS) to HI-C655.

(1) Select ● 2. All nodes on the network on the “FieldTool : Network environment” screen and click OK.



FieldTool

FieldTool : Network environment

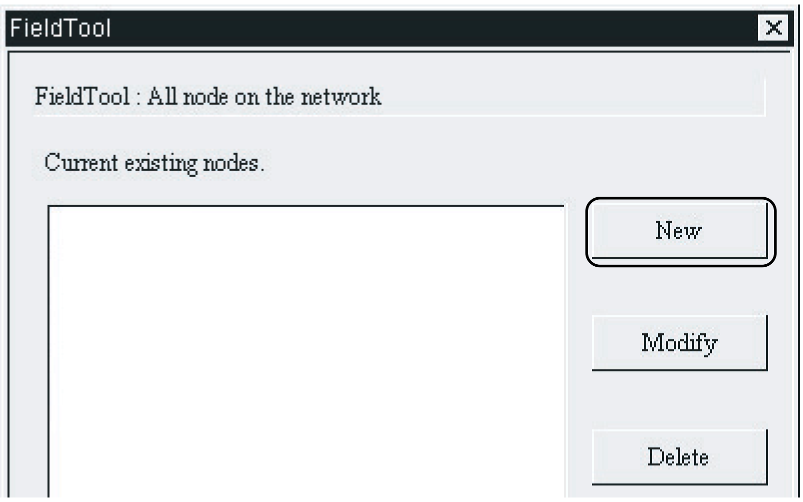
Choose the one of these menu.

○ 1. This HI-C655
● 2. All nodes on the network
○ 3. Protocols

FR1B5382.EPS

➔ The list of host names included in the “FieldTool : All nodes on the network” dialog box appears.

(2) Click New.



FieldTool

FieldTool : All node on the network

Current existing nodes.

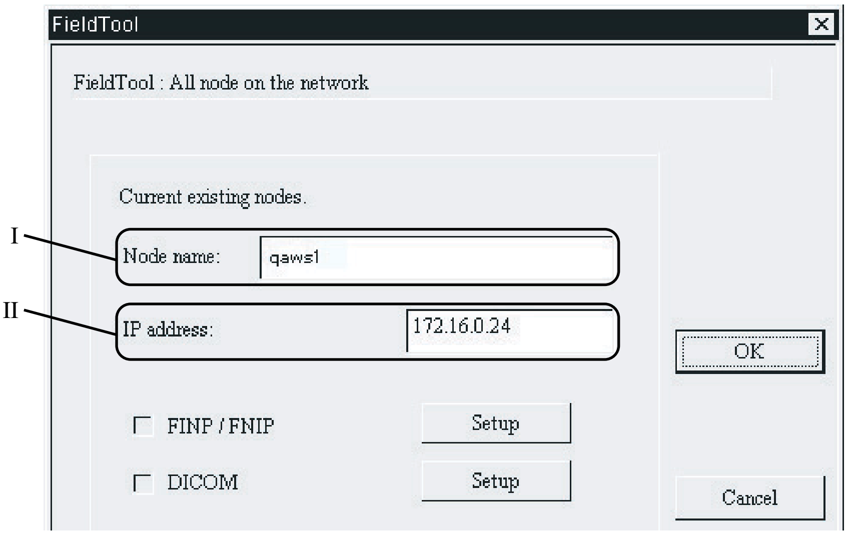
FR1B5309.EPS

◆ *REFERENCE* ◆

- *The list presents host names of the equipment already registered.*
- *To change the set content of the equipment, select the host name and then click* Modify.
- *To delete equipment already registered, select the host name and then click* Delete.

➔ “FieldTool : All nodes on the network” setting screen appears.

(3) Enter the host name and the IP address of the Other Connected Host.


FieldTool
FieldTool : All node on the network
Current existing nodes.
I
II
☐ FINP / FNIP
☐ DICOM
Setup
Setup
OK
Cancel

Node name: qaws1

IP address: 172.16.0.24

FR1B5326.EPS

I. Enter the host name (e.g.: qaws1) in the “Node name” column.

◆ *REFERENCE* ◆

A maximum of 20 alphanumerics and hyphens (“-”) can be entered for the host name.

II. Enter the IP address (e.g.: 172.16.0.24) in the “IP address” column.

■ Settings of FINP for the Other Connected Host (For when HI-C655 outputs images to QA-WS via FINP.)

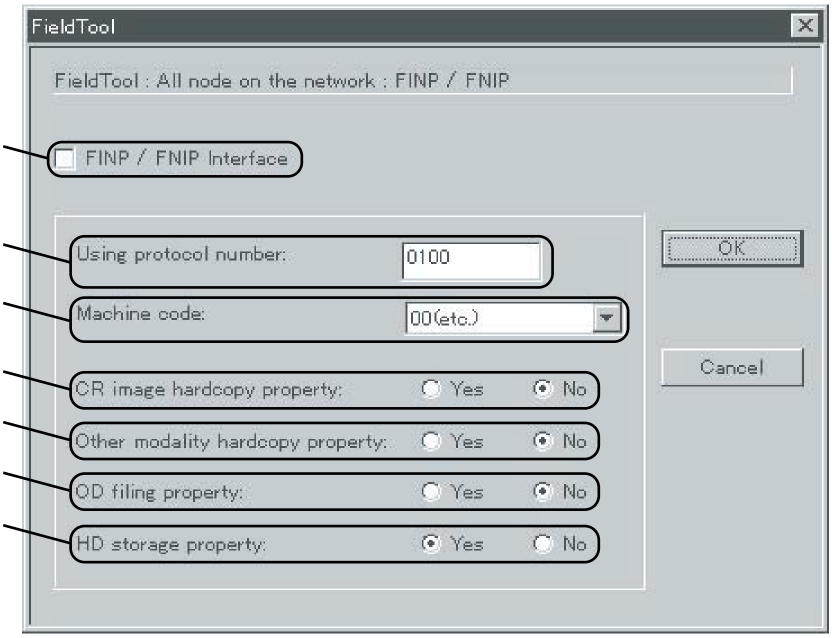
Presented below are setup procedures for HI-C655 to output images to QA-WS via FINP.

◆ NOTE ◆

If both FINP and DICOM have been specified, DICOM will be used prevailingly.

(1) Click Setup of "FINP/FNIP" on the "FieldTool : All nodes on the network" setting screen.
➔ The "FieldTool : All nodes on the network : FINP/FNIP" screen appears.

(2) Set FINP as follows.



FieldTool

FieldTool : All node on the network : FINP / FNIP

I ☐ FINP / FNIP Interface

II Using protocol number: 0100

III Machine code: 00(etc.)

IV CR image hardcopy property: ○ Yes ● No

V Other modality hardcopy property: ○ Yes ● No

VI OD filing property: ○ Yes ● No

VII HD storage property: ● Yes ○ No

FR1B5311.EPS

I. Click (☐ ➔ ☑) if FINP/FNIP is used.

II. Enter the protocol ID number (e.g.: 0100) used by the Other Connected Host.
The following ID numbers can be used.
0001 : HIC654 (– A06), ODF613, ODF623
0100 : HIC654 (A07 – , E –), DICOM G/W, MF-300L,
Print Server, NIU, File Server, ODF614, ODF624

◆ NOTE ◆

To enable the image processing selection flag, enter "0110".
Make sure however that the Other Connected Host to which images are transferred is available for FINP0110.

III. From the table below, select the device code (e.g.: 00) for identifying Other Connected Hosts.

Device Name	Device Code	Device Name	Device Code
5000	D1	ODF614/624	00
5000R	D2	FN -PS551	00
5501	D8	CR-DM666	00
HIC654	00	MF-300L	00
ODF613/623	00	DM-FS665	00

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IV. Select ○ Yes when the Other Connected Host is the image reader.

V. Select ○ Yes when the Other Connected Host is the FM-series device.

VI. Select ○ Yes when the Other Connected Host is the ODF-series device.

VII. Select ○ Yes when the Other Connected Host is the HIC-series device.

(3) Click OK .
➔ The display returns to the “FieldTool : All nodes on the network” setting screen.

■ Settings of FCR/DMS Interface to Other Connected Hosts (When equipment connected to QA-WS via the FCR/DMS interface is available)

Described herein are procedures when equipment connected to the Other Connected Host (QA-WS) via the FCR/DMS interface is available, as illustrated below.

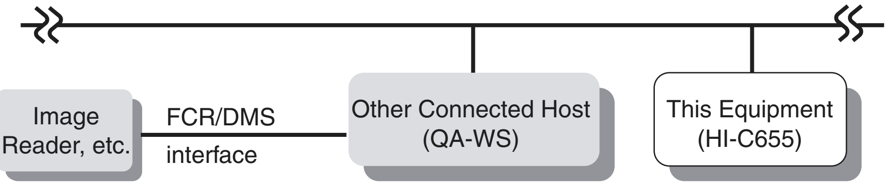


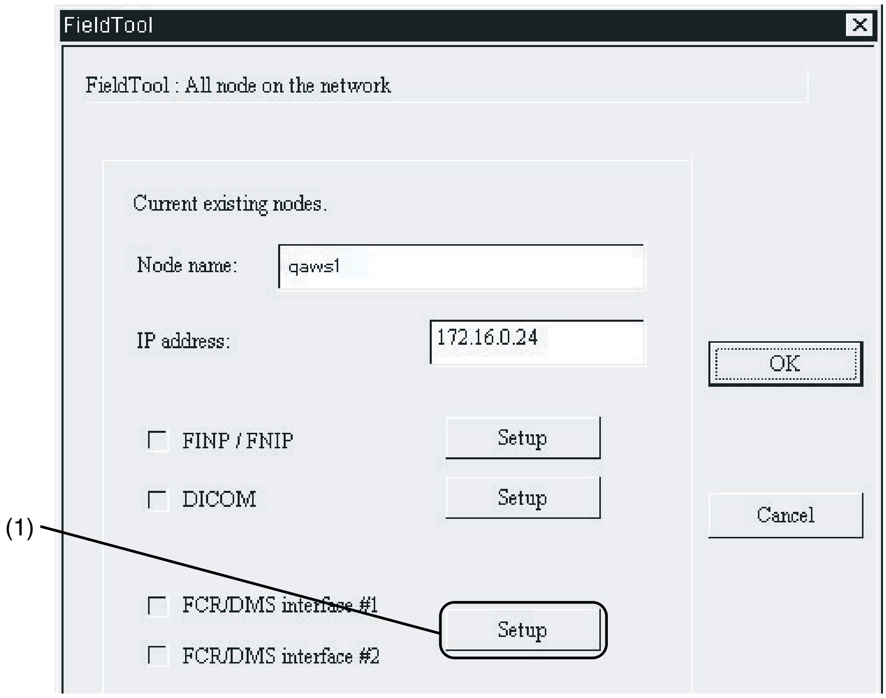
Image Reader, etc.
FCR/DMS interface
Other Connected Host (QA-WS)
This Equipment (HI-C655)

FR1B5327.EPS

◆ REFERENCE ◆

If no equipment is connected to the Other Connected Host, proceed to "n Registration of DICOM AE Name of the Other Connected Host".

(1) Click Setup of the "FCR/DMS interface" dialog.


FieldTool
OK
Cancel
Setup
Setup
Setup
(1)

FieldTool : All node on the network

Current existing nodes.

Node name: qaws1

IP address: 172.16.0.24

☐ FINP / FNIP

☐ DICOM

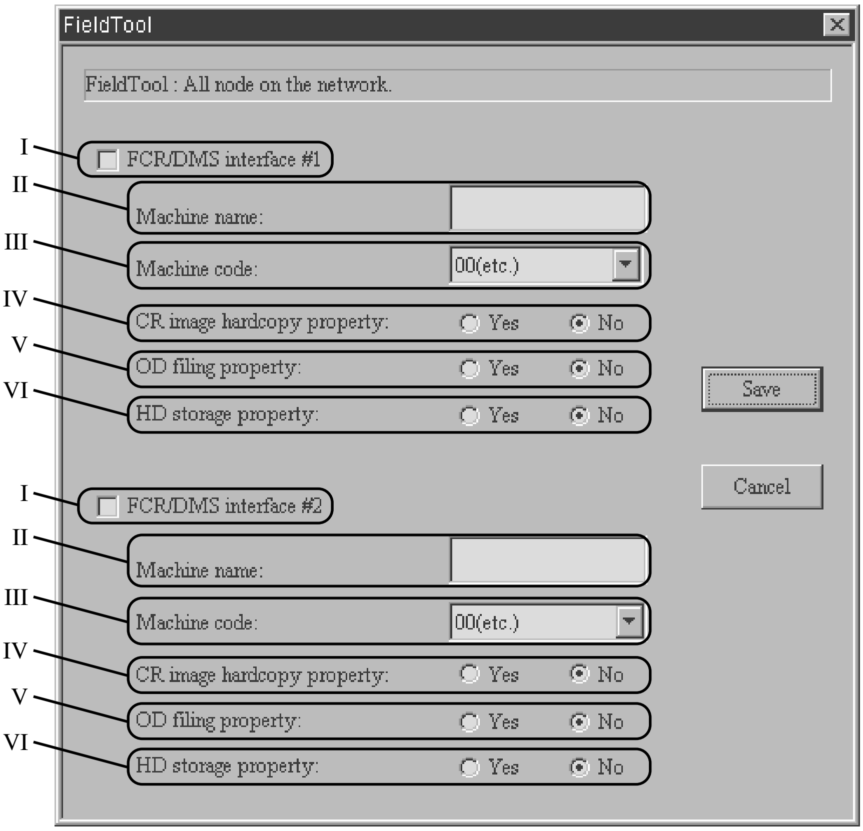
☐ FCR/DMS interface #1

☐ FCR/DMS interface #2

FR1B5383.EPS

➔ The "FCR/DMS interface" setting screen of "FieldTool : All nodes on the network" appears.

(2) Set nodes connected to the Other Connected Host.



FieldTool : All node on the network.

☐ FCR/DMS interface #1

Machine name:

Machine code: 00(etc.)

CR image hardcopy property: ○ Yes ● No

OD filing property: ○ Yes ● No

HD storage property: ○ Yes ● No

☐ FCR/DMS interface #2

Machine name:

Machine code: 00(etc.)

CR image hardcopy property: ○ Yes ● No

OD filing property: ○ Yes ● No

HD storage property: ○ Yes ● No

FR1B5313.EPS

I	No. of connections	When 1 node is connected : Check #1. When 2 nodes are connected : Check both #1 and #2.
II	Equipment name	E.g.: FCR9000A
III	Equipment code	E.g.: B1
IV	Equipment type (Image Reader)	E.g.: Yes
V	Equipment type (ODF)	E.g.: No
VI	Equipment type (HIC)	E.g.: No

TR1B5305.EPS

Following are the device codes used.

Device Name	Device Code	Device Name	Device Code
ODF613	A0	AC-3	B3
CR7000	A1	IPU515	B4
HIC652	A2	CR9501	B5
CR7501	A3	CR9502	B7
7000M	A4	9501ES	B9
7000D	A5	5000	D1
7501S	A6	5000R	D2
AC -2	AC	5501	D8
IPU514	AE	DR11WT	FD
FCR502	52	DR11W	FE
CR9000	B1	MODEM	FF

TR1B5302.EPS

◆ NOTE ◆

Set "00" for equipment not listed in the table above.

(3) Click .

➔ The display returns to the "FieldTool : All nodes on the network" setting screen.

■ Registration of DICOM AE Name of the Other Connected Host

Register the AE (Application Entity) name of the Other Connected Host.

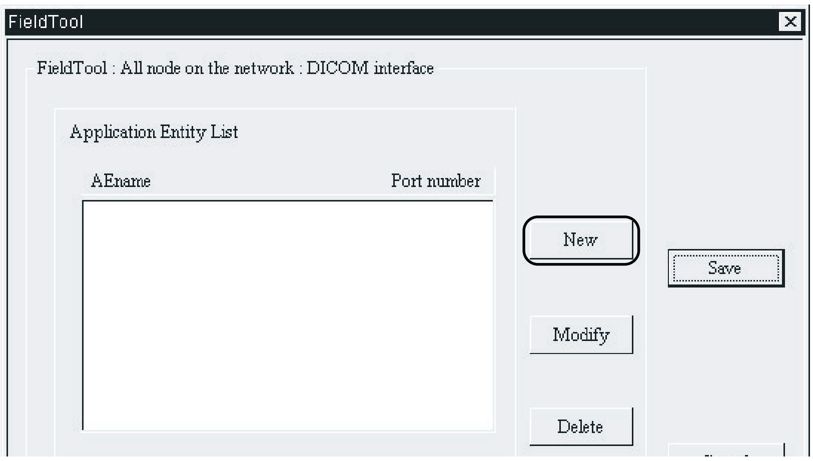
◆ NOTE ◆

- *If both FINP and DICOM have been specified, DICOM will be used prevailingly.*
- *Do not perform steps hereafter, because, using the DICOM protocol, it is not possible to search the equipment that is to be searched for (equipment targeted for search by Other Connected Hosts) and it is searched for only using the FINP protocol.*
- *A maximum of 100 AE names can be registered.*

(1) Click Setup of "DICOM" on the "FieldTool : All nodes on the network" setting screen.

➔ The "FieldTool : All nodes on the network : DICOM interface" screen appears.

(2) Click New.


FieldTool
FieldTool : All node on the network : DICOM interface
Application Entity List
AEname
Port number
New
Save
Modify
Delete

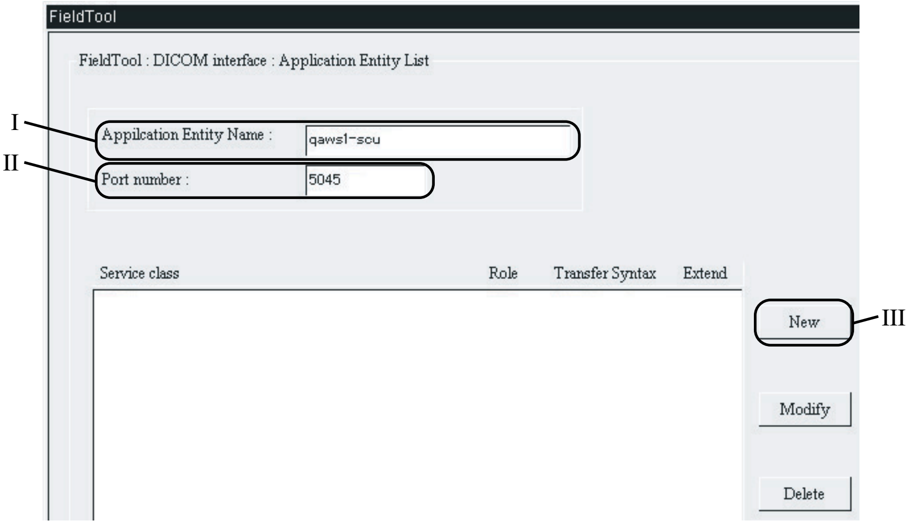
FR1B5314.EPS

◆ REFERENCE ◆

- *The list presents already registered AEs if any.*
- *To change set content, select the AE name and click* Modify.
- *To delete the AE name, select the AE name and click* Delete.

➔ The "FieldTool : DICOM interface : Application Entity List" screen appears.

(3) Enter the AE name and the port number of the Other Connected Host.


FieldTool
FieldTool : DICOM interface : Application Entity List
I
II
III
Service class
Role
Transfer Syntax
Extend
New
Modify
Delete

Appilcation Entity Name : qaws1-scu

Port number : 5045

FR1B5328.EPS

◆ REFERENCE ◆

The list presents already registered Service Classes.

I. Enter in the “Application Entity Name” column the AE name (e.g.: qaws1-scu) used by the Other Connected Host.

II. Enter in the “Port number” column the port number (e.g.: 5045) used by the Other Connected Host.

◆ NOTE ◆

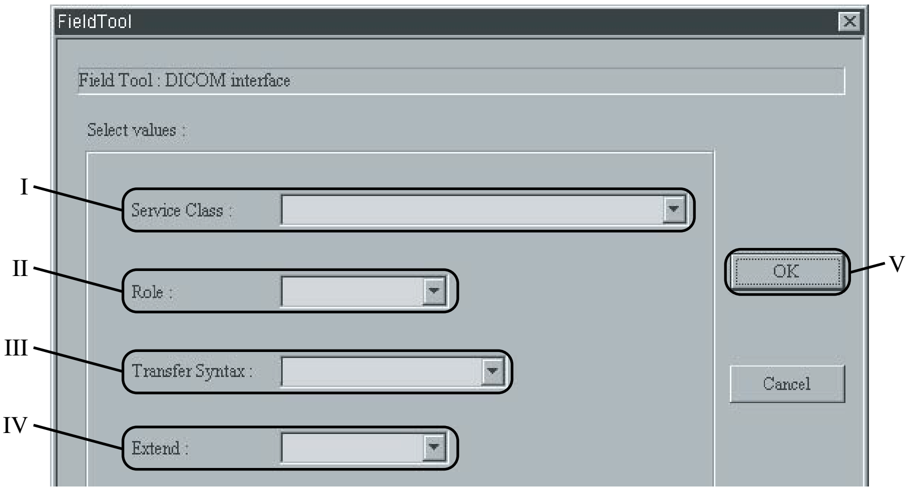
- *Enter the port number between 1 and 65535, in accordance with settings of the Other Connected Host.*
- *Do not use the same port number that has already been used for other networked equipment.*

III. Click New.
➔ The “FieldTool : DICOM interface” screen appears.

◆ REFERENCE ◆

- *To change set content, select the Service Class and click* Modify.
- *To delete the Service Class, select the Service Class and click* Delete.

(4) On the “FieldTool : DICOM interface” screen below, set the Service Class and the Transfer Syntax.


FieldTool
Field Tool : DICOM interface
Select values :
I
Service Class :
II
Role :
III
Transfer Syntax :
IV
Extend :
OK
V
Cancel

FR1B5316.EPS

I. Select the Service Class (e.g.: CR Storage).
Any of the following can be selected as the Service Class.

- CR Storage
- Patient Root Q/A information model
- Study Root Q/A information model
- Verification

II. Select the Role (e.g.: SCU).

III. Select the Transfer Syntax (e.g.: JPEG LossLess).
Any of the following can be selected as the Transfer Syntax.

- LEI (implicit VR Little Endian)
- LEE (Explicit VR Little Endian)
- JPEG LossLess

◆ *NOTE* ◆

Do not set Service Classes or Transfer Syntax other than the above, because This HI-C655 does not supports them even though the Other Connected Host does.

IV. Select Yes or No for the Extend function.

◆ *NOTE* ◆

The above settings are possible individually. However, due to the relation with respect to the Service Class, those settings cannot be possible depending on the combinations listed in the table below.

Service Class	Role	Transfer Syntax
CR Storage	SCU&SCP	All (LEI, LEE, JPEG) possible
Verification	SCU	Possible only with LEI
Verification	SCP	All impossible (Verification not possible with the SCP)

TR1B5303.EPS

V. Click OK.
➔ The display returns to the “FieldTool : DICOM interface : Application Entity List” screen.

(5) To set a multiple number of Service Class or Transfer Syntax continuously, repeat steps (3) and (4).

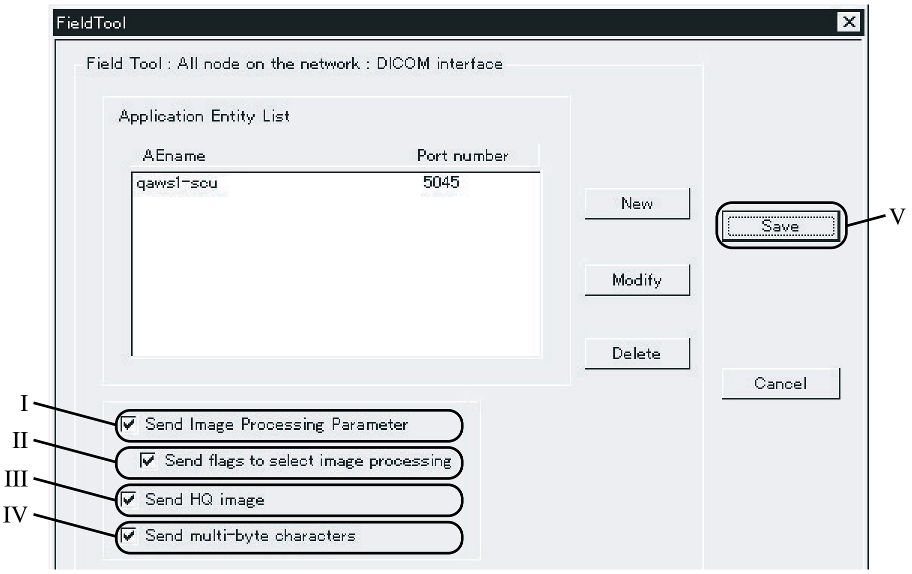
(6) Click OK.
➔ The display returns to the “FieldTool : All nodes on the network : DICOM interface” screen.

(7) To set a multiple number of AE name continuously, repeat steps (2) to (6).

■ Settings of Details of Image Transmission/Reception with Other Connected Hosts

Specify processing to be done on images for transmission/reception.

(1) On the “FieldTool : All nodes on the network : DICOM interface” screen, specify processing to be done on images.



AEname	Port number
qawsl-scu	5045

☑ Send Image Processing Parameter
☑ Send flags to select image processing
☑ Send HQ image
☑ Send multi-byte characters

FR1B5335.EPS

I. If this dialog box is checked (☐ ➔ ☑), the image processing parameter will be attached to the data for transmission, when an image is transmitted using “Private CR Storage”.

◆ *NOTE* ◆

This setting is enabled only when the Private DICOM Key has been installed.

II. Select whether or not to add image processing selection flag to the image processing parameter (☑: add, ☐: not to add).

III. If this dialog box is checked (☐ ➔ ☑), high quality images will be transmitted as they are, with no image quality conversion done.
If not checked, high quality images will be subjected to GS conversion making those images converted to standard images and then transmitted. Images of modality other than the CR will not be converted to standard images.

IV. If this dialog box is checked (☐ ➔ ☑), Multi-Byte characters will be transmitted.

V. Click Save.
➔ The display returns to the “FieldTool : All nodes on the network” setting screen.

(2) Click OK.
➔ The display returns to the host name list screen on “FieldTool : All nodes on the network”.

(3) To make the same settings for a multiple number of equipment, repeat step (2) of “n Registration of the Other Connected Host (QA-WS)” – step (2) of “n Settings of Details of Image Transmission/Reception with Other Connected Hosts”.

(4) Click Save of the host name list screen on “FieldTool : All nodes on the network”.
➔ The display returns to the “FieldTool : Network environment” screen.

5.4 Configuring the FCR/DMS Interfaces of this Equipment

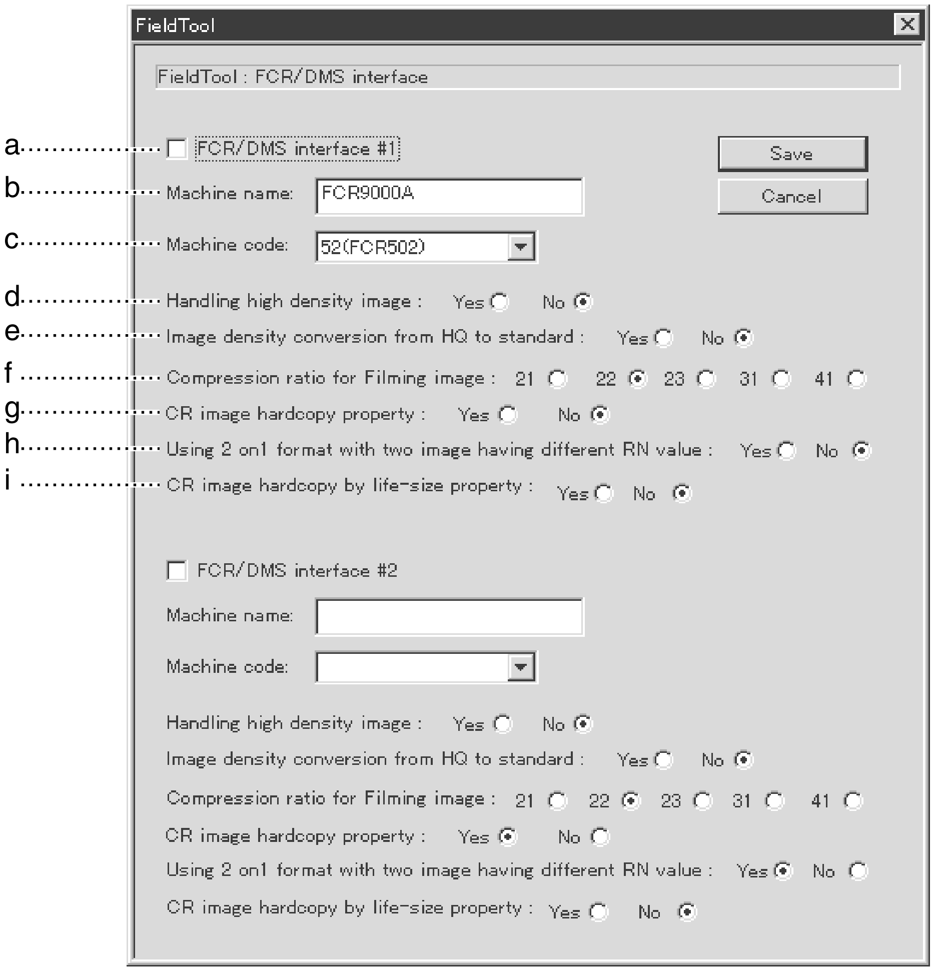
Perform the following procedure when connecting the FCR/DMS devices to this equipment via the FCR/DMS interfaces.

◆ ***NOTE*** ◆

If using the FCR/DMS interface when re-installing the application, be sure to select "FCR/DMS interface" at "Install option2" during "Maintenance 10. Installing the QA-WS Application".

(1) Select the "3. FCR/DMS interface" radio button at the "Field Tool:Main Menu" dialog box, and click [OK].

(2) At the "FCR/DMS interface" dialog box, specify the FCR/DMS devices connected to the FCR/DMS interface #1 and #2.



☐ FCR/DMS interface #1
Machine name: FCR9000A
Machine code: 52(FCR502)
Handling high density image : Yes ○ No ●
Image density conversion from HQ to standard : Yes ○ No ●
Compression ratio for Filming image : 21 ○ 22 ● 23 ○ 31 ○ 41 ○
CR image hardcopy property : Yes ○ No ●
Using 2 on1 format with two image having different RN value : Yes ○ No ●
CR image hardcopy by life-size property : Yes ○ No ●

☐ FCR/DMS interface #2
Machine name:
Machine code:
Handling high density image : Yes ○ No ●
Image density conversion from HQ to standard : Yes ○ No ●
Compression ratio for Filming image : 21 ○ 22 ● 23 ○ 31 ○ 41 ○
CR image hardcopy property : Yes ● No ○
Using 2 on1 format with two image having different RN value : Yes ● No ○
CR image hardcopy by life-size property : Yes ○ No ●

a. Select the "FCR/DMS interface#1" radio button.

b. Enter any name for other connected host (e.g.:FCR9000A).

◆ ***NOTE*** ◆

The host name entered can be up to 20 characters long and must consist of alphabets, numerals (capital) and hyphens.

c. Enter the appropriate machine code (e.g.: B1) for the device connected.

Set the machine codes as follows.

Device Name	Machine Code	Device Name	Machine Code
ODF613	A0	CR9000	B1
CR7000	A1	AC-3	B3
HIC652	A2	IPU515	B4
CR7501	A3	CR9501	B5
7000M	A4	CR9502	B7
7000D	A5	9501ES	B9
7501S	A6	5000	D1
AC-2	AC	5000R	D2
IPU514	AE	5501	D8
FCR502	52	DR11WT	FD
		DR11W	FE
		MODEM	FF

d. Specify whether the device connected accepts high density images from this equipment. (E.g.: No)

e. Specify whether to convert high density images to the standard density when this equipment sends images to other nodes on the network. (E.g.: No)

f. Select the code for the compression rate of the images sent from the host on the network for film output. (E.g.:22)

The compression codes which can be selected are as follows.

Compression Ratio	Code
1:2 compression with 8-bit support	21
1:2 compression	22
1:12 compression	23
1:20 compression	31
1:5 compression	41

g. Specify whether the device can print CR images on film. (E.g:Yes)

h. When printing by the 2-image format, specify whether the device can process the image for printing the left and right images at different RNs.

i. Specify whether the device can process images for printing high density images (14" x 17" and 14" x 14") on 14" x 17" films at full size. (E.g.:No)

(3) Select the "FCR/DMS interface #2" radio button if the second device is connected to this equipment via the FCR/DMS interface.
After setting, click [Save].

5.5 Configuring Image Distribution Functions

◆ ***NOTE*** ◆

Define the distribution codes same as for the distribution codes already used on the network.

Set the function to automatically transfer images to the other connected hosts in case this equipment is connected via the FCR/DMS interface.
Specify the interface at the image input side, specify the interface at the image output side, and set the conditions for executing the function for outputting images input from one interface to another interface.

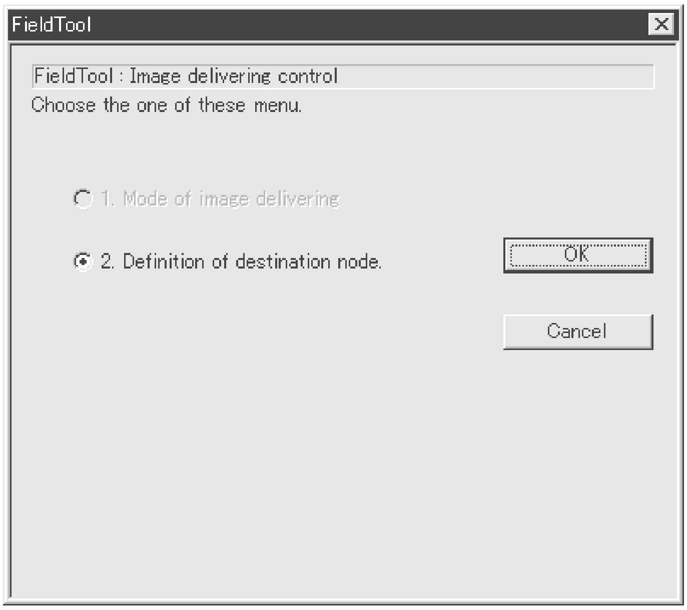
(1) Select the "4. Image delivering control" radio button at the "Field Tool:Main Menu" dialog box.

■ By Distribution Code

◆ *NOTE* ◆

Define the distribution codes same as for the distribution codes already used on the network.

(1) Select the "2. Definition of destination node" radio button, and click [OK].



FieldTool

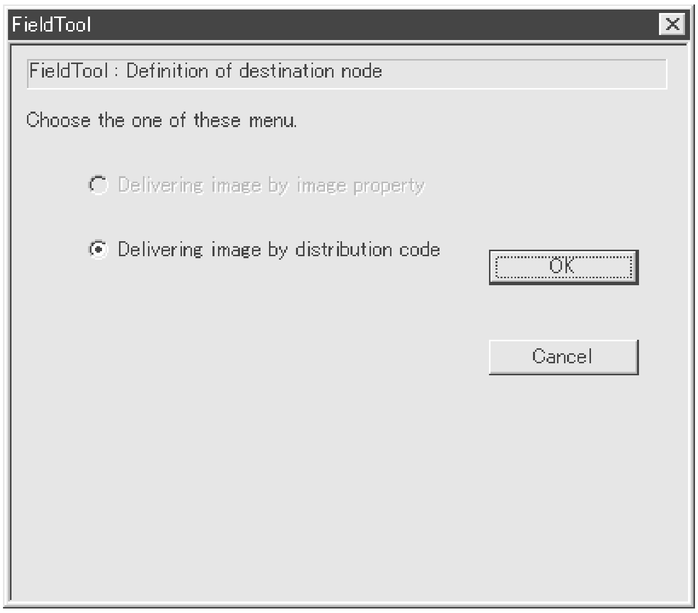
FieldTool : Image delivering control

Choose the one of these menu.

○ 1. Mode of image delivering

● 2. Definition of destination node.

(2) At the following dialog box, select the "Delivering image by distribution code" radio button, and click [OK].



FieldTool

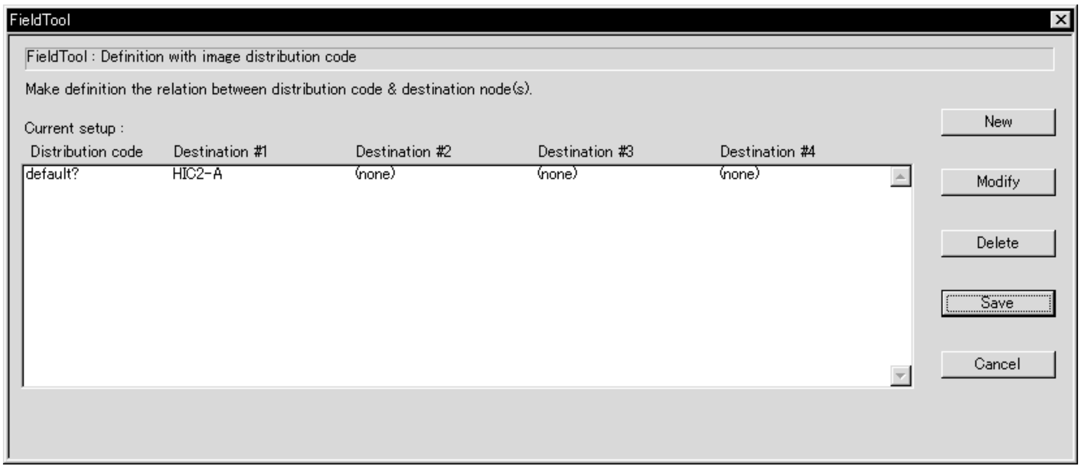
FieldTool : Definition of destination node

Choose the one of these menu.

○ Delivering image by image property

● Delivering image by distribution code

(3) The "Definition with image distribution code" dialog box appears.
Click [New] at the top right.



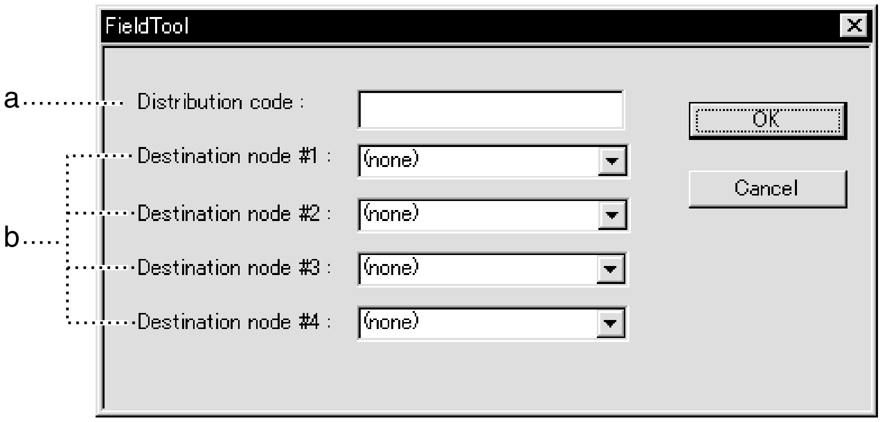
FieldTool : Definition with image distribution code

Make definition the relation between distribution code & destination node(s).

Current setup :

Distribution code	Destination #1	Destination #2	Destination #3	Destination #4
default?	HIC2-A	(none)	(none)	(none)

(4) Set the distribution code and destination hosts in the boxes of the following dialog box .



Distribution code :

Destination node #1 : (none)

Destination node #2 : (none)

Destination node #3 : (none)

Destination node #4 : (none)

a. Enter the distribution code.

◆ *REFERENCE* ◆

Enter up to 8 alphabets, numerals, and ? for the distribution code.

b. Click ▼ of the "Destination node #1" box, and select the destination host from the destination node list.

◆ *NOTE* ◆

- *"Destination node" displays the host set at "■ Setting Network Host Parameters".*
- *Up to four destination hosts can be set.*
- *The distribution code "default?" is reserved code. Images that have a distribution code that is not registered are transferred to the device that corresponds to "default?". Be sure to set up the destination equipment as default for the distribution code of "default?".*

(5) After setting, click [OK].

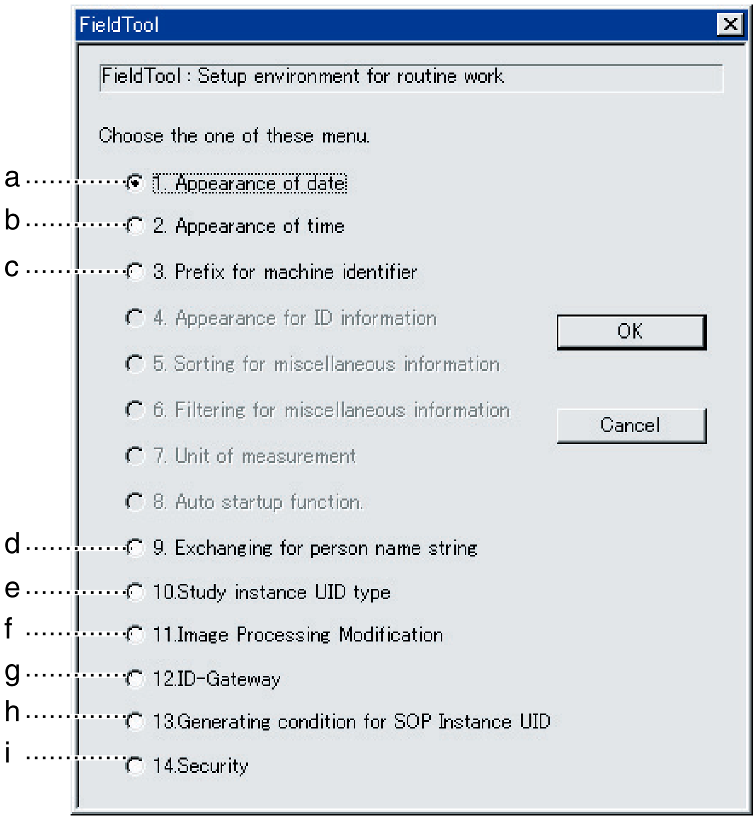
(6) The "Definition with image distribution code" dialog box reappears.
When setting several distribution codes, return to step (3) above.
To end settings, click [Save].

5.6 Configuring the User Environment

Set the user environment of this equipment.

(1) Click "7. Appearance for routine usage" at the "Field Tool: Main Menu" dialog box, and then [OK].

(2) At the "Setup environment for routine work" dialog box, select the user parameters to be set and click [OK].


FieldTool
FieldTool : Setup environment for routine work
Choose the one of these menu.
a ● 1. Appearance of date
b ○ 2. Appearance of time
c ○ 3. Prefix for machine identifier
○ 4. Appearance for ID information
○ 5. Sorting for miscellaneous information
○ 6. Filtering for miscellaneous information
○ 7. Unit of measurement
○ 8. Auto startup function.
d ○ 9. Exchanging for person name string
e ○ 10.Study instance UID type
f ○ 11.Image Processing Modification
g ○ 12.ID-Gateway
h ○ 13.Generating condition for SOP Instance UID
i ○ 14.Security
OK
Cancel

a. Select this radio button to specify the date format.
   (See "■ Specifying the Date Format".)

b. Select this radio button to specify the time format.
   (See "■ Specifying the Time Format".)

c. Select this radio button to specify the machine identifier prefix.
   (See "■ Specifying the Machine Identifier Prefix".)

d. Select this radio button to set the segment characters and order of components of the Person Name.
   (See "5.7 Setting the Components of Person Name".)

e. Select this radio button to set the Study instance UID type.
   (See "5.8 Setting the Study Instance UID Type".)

f. Image Processing Modification

g. Select this radio button to set the ID-Gateway function.
   (See "Appendix 2.2 ID Information Composition Function" in Maintenance.)

h. Select this radio button to reissue the SOP-Instance-UID when, for instance, an image information item was changed.
   (See "Appendix 7.6 Reissuing the SOP-Instance-UID Number When Image Information is Changed" in Maintenance.)

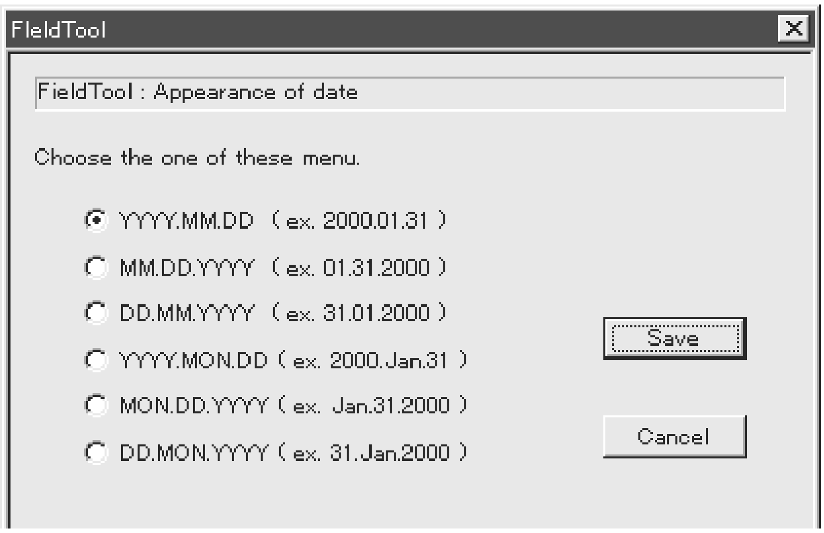
i. Select this radio button to set the QA-WS security function.
   (See "Appendix 7.4 Setting Up the Security Function" in Maintenance.)

■ Specifying the Date Format

(1) At the "Appearance of date" dialog box, select the date format from the choices listed in the following table, and click [Save].

The date format is as follows.

Format	Example
YYYY.MM.DD	1999.03.30
MM.DD.YYYY	08.30.1999
DD.MM.YYYY	30.08.1999
YYYY.MON.DD	1999.AUG.30
MCN.DD.YYYY	AUG.30.1999
DD.MON.YYYY	30.AUG.1999



FieldTool : Appearance of date

Choose the one of these menu.

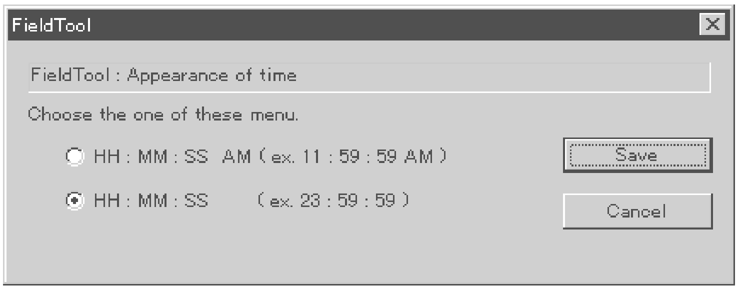
● YYYY.MM.DD （ex. 2000.01.31 ）
○ MM.DD.YYYY （ex. 01.31.2000 ）
○ DD.MM.YYYY （ex. 31.01.2000 ）
○ YYYY.MON.DD (ex. 2000.Jan.31)
○ MON.DD.YYYY (ex. Jan.31.2000)
○ DD.MON.YYYY (ex. 31.Jan.2000)

■ Specifying the Time Format

(1) Select the desired time format at the "Appearance of time" screen and click [Save].

The time formats available are as follows.

Format	Display of Time
HH:MM:SS AM	11:59:59 AM
HH:MM:SS	23:59:59



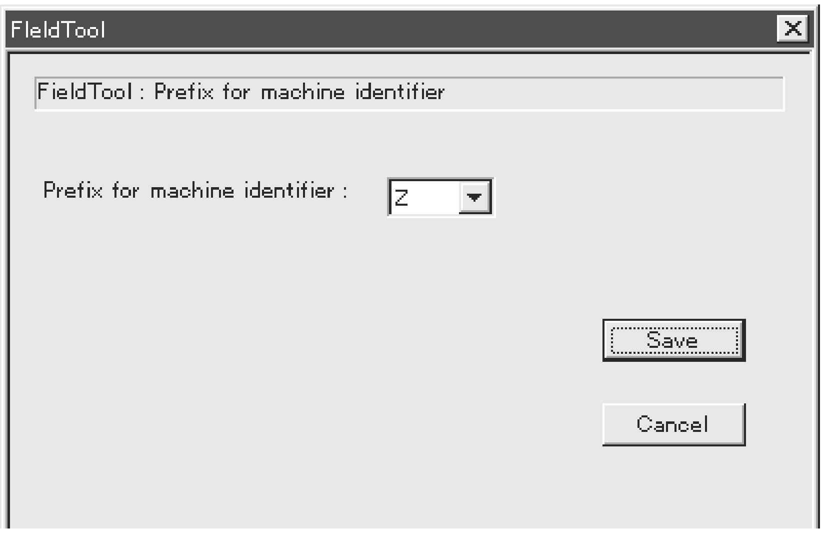
FieldTool : Appearance of time

Choose the one of these menu.

○ HH : MM : SS AM (ex. 11 : 59 : 59 AM)
● HH : MM : SS (ex. 23 : 59 : 59)

■ Specifying the Machine Identifier Prefix

(1) Select the desired ID alphabet (from A to Z) in the "Prefix for machine identifier" box and click [Save].



FieldTool : Prefix for machine identifier

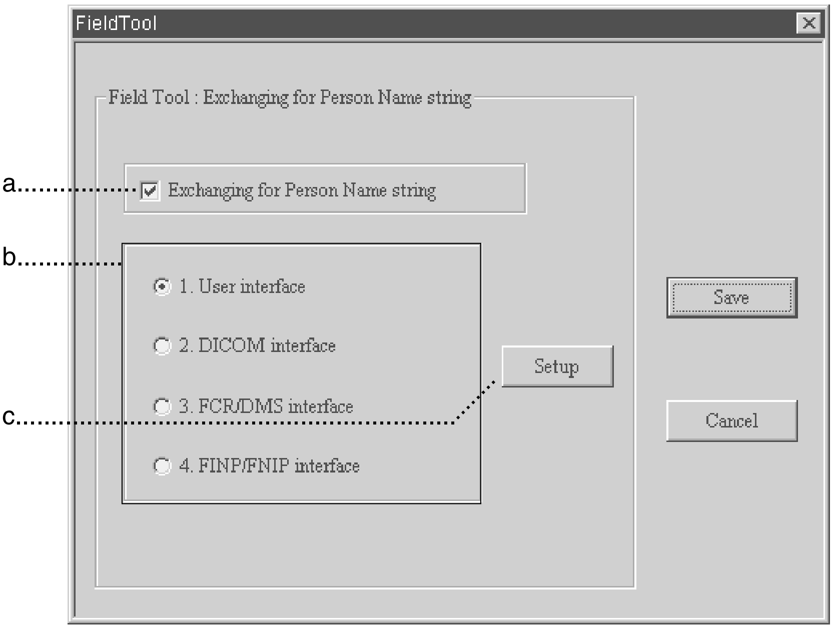
Prefix for machine identifier : Z

5.7 Setting the Components of Person Name

Set at the user operation initial screen.

The user operation initial screen can be set to the 2 subdivided window or 16 subdivided window.

(1) The "Exchanging for Person Name string" dialog box appears.


FieldTool
Field Tool : Exchanging for Person Name string
a
☑ Exchanging for Person Name string
b
● 1. User interface
○ 2. DICOM interface
c
○ 3. FCR/DMS interface
○ 4. FINP/FNIP interface
Setup
Save
Cancel

a. Select to validate the setting.

b. Select the interface whose settings are to be changed.

The default settings of each interface are as follows.

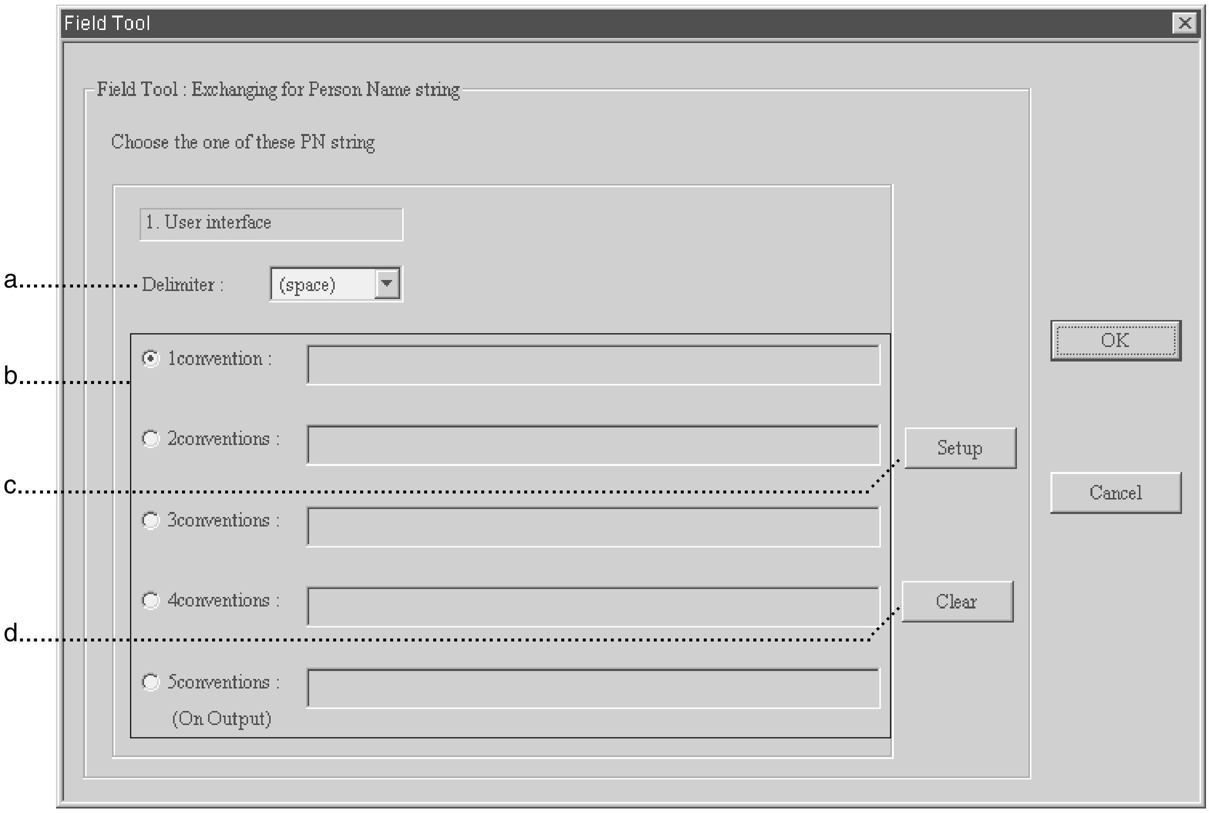
Interface	Segment Character	Order of Components
User i/f	Space	Same as DICOM specifications.
DICOM i/f	Caret	
FINP/FNIP i/f	Space	
FCR/DMS i/f	Space	

c. Click to change the settings of the interface selected.

■ Changing the Settings of Interfaces

(1) Select the interface to be changed at the "Choose the one of these PN string" dialog box.
Click [Setup].

The following dialog box appears.



Field Tool

Field Tool : Exchanging for Person Name string

Choose the one of these PN string

1. User interface

Delimiter : (space)

● 1convention :

○ 2conventions :

○ 3conventions :

○ 4conventions :

○ 5conventions :
(On Output)

a. Select the segment character (delimiter) from the following choices.

	Space
^	Caret
.	Period
,	Comma

b. Select the number of components to be changed.

◆ ***NOTE*** ◆

This is set to “5conventions” at output.

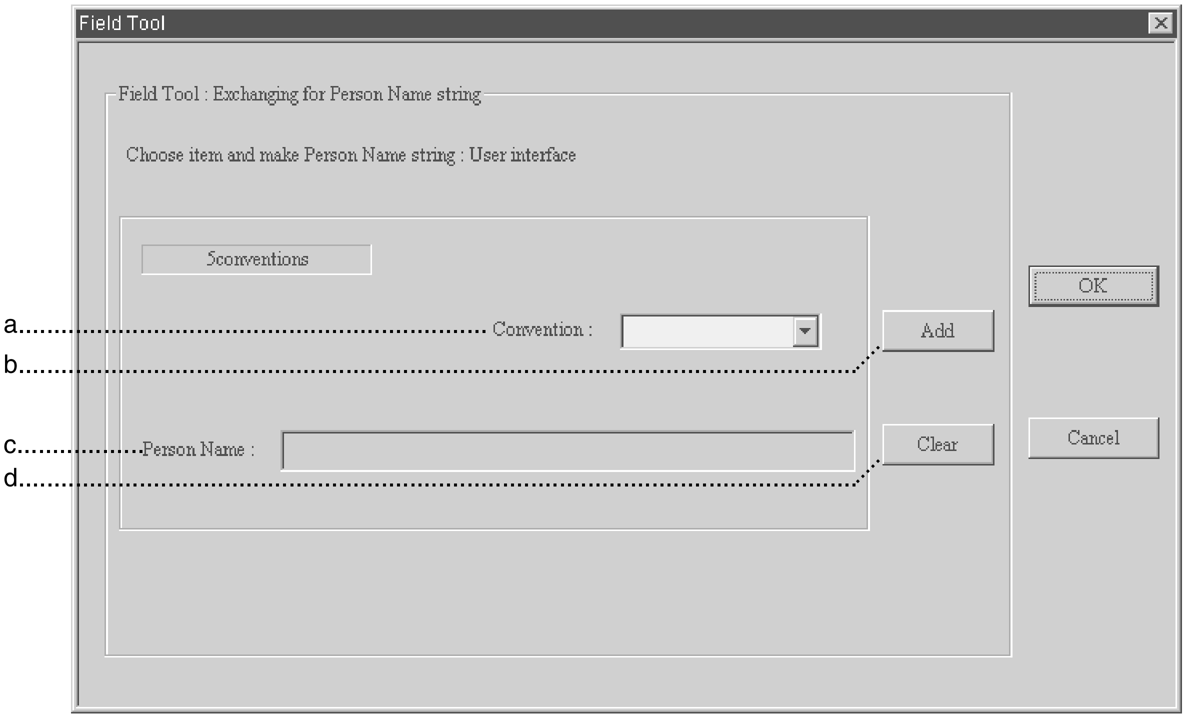
c. Click to change the order of components selected.

◆ ***NOTE*** ◆

The order of setting the components depends on the number of components.

d. Click to delete the components in the order selected.

(2) Select the components to be changed, and click [Setup].
Set the order.



Field Tool

Field Tool : Exchanging for Person Name string

Choose item and make Person Name string : User interface

a. Select the component to be set from the folowing choices.
  - familyname
  - givenname
  - middlename
  - prefixname
  - suffixname

b. Click to register the component selected.

c. Shows the component registered.

d. Click to delete the registered component.

(3) Click [OK] after setting the order of the components.

(4) The "Choose the one of these PN strings" dialog box returns.
To change any component, click [Setup]. Otherwise click [OK].

(5) The "Exchanging for Person Name string" dialog box returns.
To change any desired interface, click [Setup]. Otherwise, click [Save] to save the settings.

5.8 Setting the Study Instance UID Type

Set the Study Instance UID items in accordance with hospital's system operation conditions, based on the guidelines described below, so that the FCR image diagnosis is categorized to "Examination".

(1) System operation when the RIS (Radiography Information System) is not used:

● Specifying the patient name, date of examination and the imaging modality
These information items are always used for any CR system.
(Select "c" on the display below.)

❍ To identify examinations based on the department requiring images for diagnosis, instead of the imaging modality, specify the patient name, date of examination and the department that requires images.
(Select "d" on the display below.)

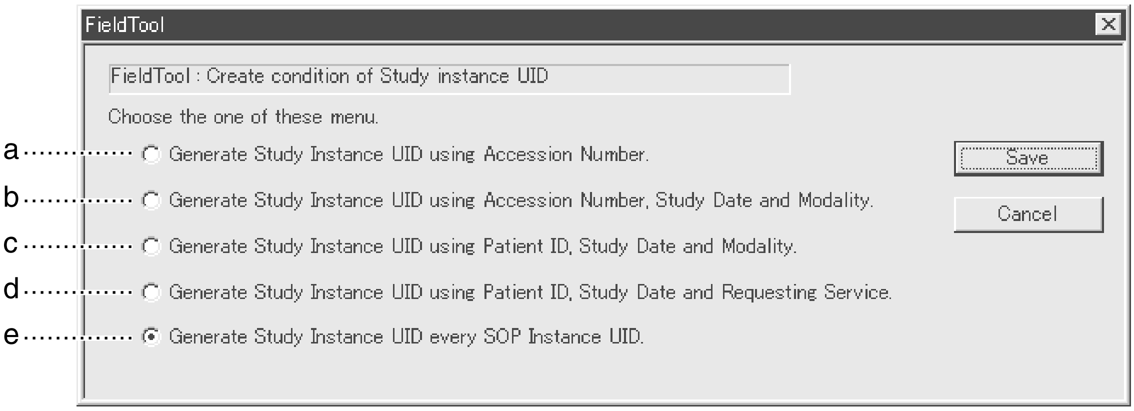
(2) System operation when the RIS is used:

● When the RIS is connected, accession numbers are basically issued by the RIS. If in that institution there are no accession numbers same as the one sent by the RIS ("unique"), specify only the accession number.
(Select "a" on the display below.)

❍ When the accession number is not enough to make it "unique" in that institution, additionally specify the date of examination.
(Select "b" on the display below.)

(3) For an institution in which no ID No. is issued for each patient, the UID can be issued for each image making it an examination unit, if that institution wishes to issue the UID for each image or the UID is allowed to be issued for each image.
(Select "e" on the display below.)

1. The "Create conditions of Study instance UID" menu appears. Select examination unit and click [Save].



FieldTool : Create condition of Study instance UID

Choose the one of these menu.

○ Generate Study Instance UID using Accession Number.
○ Generate Study Instance UID using Accession Number, Study Date and Modality.
○ Generate Study Instance UID using Patient ID, Study Date and Modality.
○ Generate Study Instance UID using Patient ID, Study Date and Requesting Service.
● Generate Study Instance UID every SOP Instance UID.

a. Select to categorize according to the examination no. (when the RIS is connected).
b. Select to categorize according to the examination no., date of examination and the modality (when the RIS is connected).
c. Select to categorize the patient ID, date of examination and the modality (standard operation).
d. Select to categorize the patient ID, date of examination and the department that requires images (standard operation).
e. Select when no particular examination unit is specified (one UID for each image).

■ Quitting the User Environment Configuration

(1) Return to the "Setup environment for routine work" dialog box.
If there are several items to be set, click those items.
Click [Cancel] to quit setup of the user environment configuration.

5.9 Re-building the Database

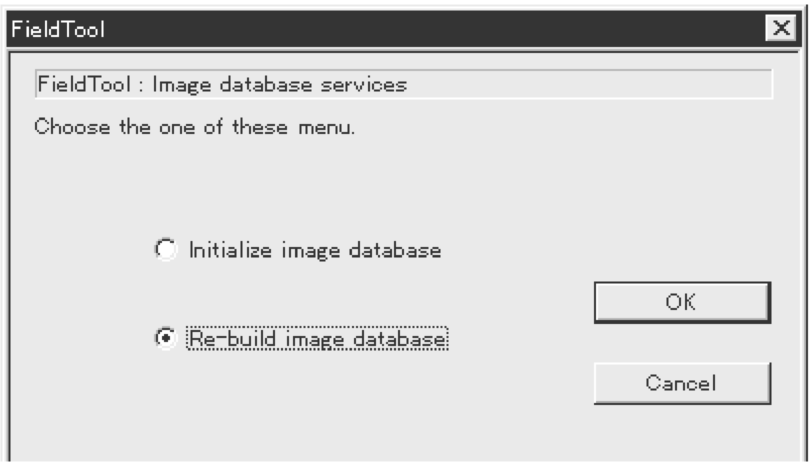
◆ *NOTE* ◆

Changing the host name at "4.3 ■ Specifying the Host Name" will disable display of images saved on the HD at shipment.

- *If these images need not be displayed after changing the host name, erase the data by "Initialize image database".*

(1) At the "Field Tool: Main Menu" dialog box, select the "8. Image database service" radio button.

(2) The "Image database services" dialog box appears.
Click "Re-build image database" and then [OK].



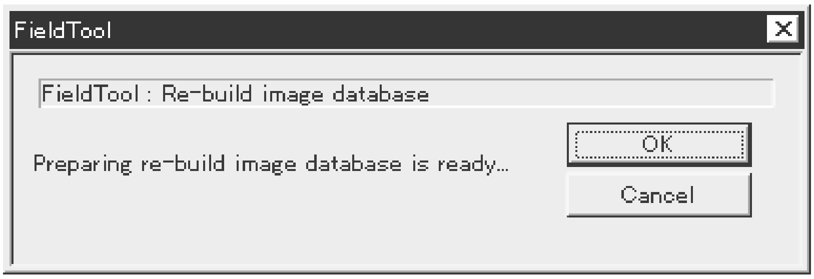
FieldTool : Image database services

Choose the one of these menu.

○ Initialize image database

● Re-build image database

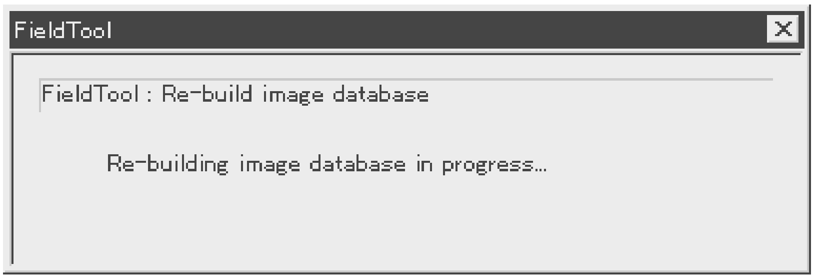
(3) Click [OK] to re-build the database.



FieldTool : Re-build image database

Preparing re-build image database is ready...

(4) A message indicating that the database is being rebuilt appears.

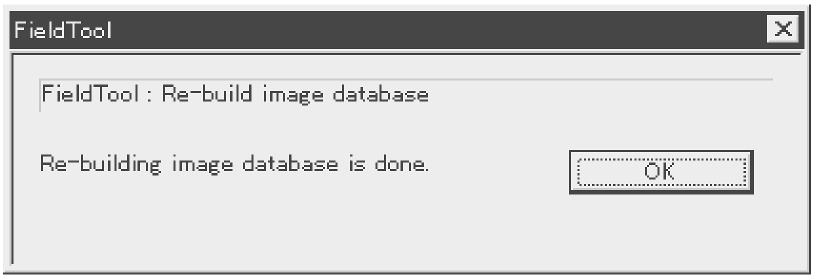


FieldTool

FieldTool : Re-build image database

Re-building image database in progress...

(5) When re-building completes, the following dialog box appears.
Click [OK].



FieldTool

FieldTool : Re-build image database

Re-building image database is done.

(6) The "Image database services" screen reappears.
Click [Cancel].

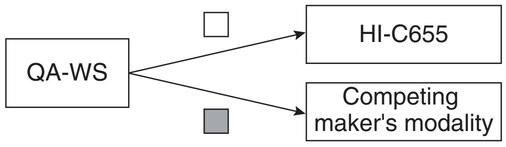
(7) At the "Field Tool: Main Menu" dialog box, select the "10. Quit Field Tool" radio button and click [OK].

5.10 Setting Up the Equipment Used for Transferring Processed Images

Use the procedure shown below to make settings necessary for transferring images processed by the QA-WS to other connected equipment.

Basically, use these settings for competing makers' modality devices that are not able to recognize image processing parameters (or that are not able to recognize Fuji private tags).

Not to process images (image processing parameters are recognized on the HI-C655 side).



Processed images

FR1B5384.EPS

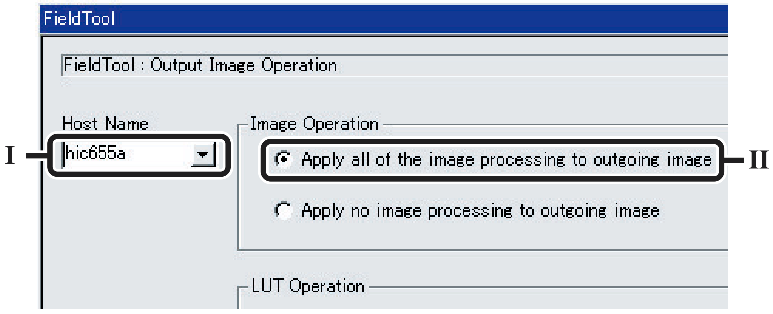
◆ NOTE ◆

To use this function, the processed image output option key must have been installed in the QA-WS.

☞ *"Maintenance Appendix 2.7 Processed Image Output Function"*

(1) Select "9. Output Image Operation" on the FieldTool Main Menu and click OK.

(2) Make the following settings.



FieldTool : Output Image Operation

Host Name: hic655a

Image Operation
- ● Apply all of the image processing to outgoing image
- ○ Apply no image processing to outgoing image

LUT Operation

FR1B5385.EPS

I. Select host name of the equipment that transfers processed images.

II. Select ● Apply all of the image processing to outgoing image.

➥ REFERENCE

"LUT Operation" is a CRT-QC-related setup item. The CRT-QC is a function that assumes responsibility for display gradation adjustments.

☞ *FCR Diagnostic Image Display Gradation Correction Procedure (CRT-QC)*

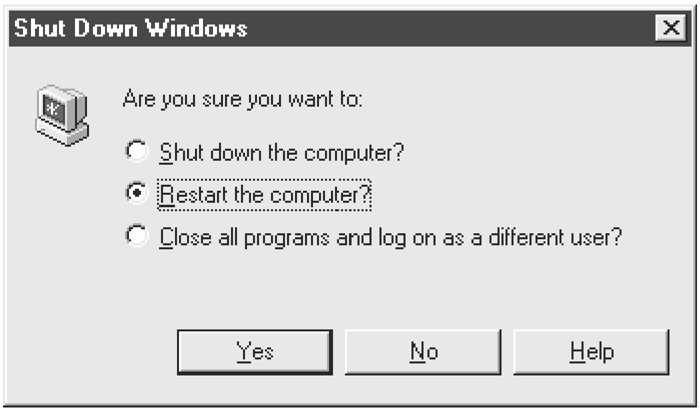
5.11 Restarting the System

(1) When the Windows NT desktop appears, click [Start] and then [Shut Down].

(2) At the "Shut Down Windows" screen, click "Restart the computer?" and then [Yes] to restart it.

◆◆ *CAUTION* ◆◆

Do not touch the keyboard while the QA-WS is being rebooted.



Shut Down Windows

Are you sure you want to:

○ Shut down the computer?

● Restart the computer?

○ Close all programs and log on as a different user?

(3) After the computer has been rebooted, the QA-WS application will start up.

6. Checking Operations

6.1 Preparing Connection Nodes

Specify node names, IP address and several other attributes so that the QA-WS can be connected to the existing nodes (network-connected HIC, ODF, etc.) that are connected to it via networks.

Settings for the QA-WS are the same as those for the conventional HIC (HIC654).
The protocol is 0100 or 0110.

After the above setup, check to see that image transfer is possible with the QA-WS. (The node names of the QA-WS should be registered and displayed in the list of image transfer destinations.)

6.2 Startup

After completing all setups, start up the user operation screen on the QA-WS.

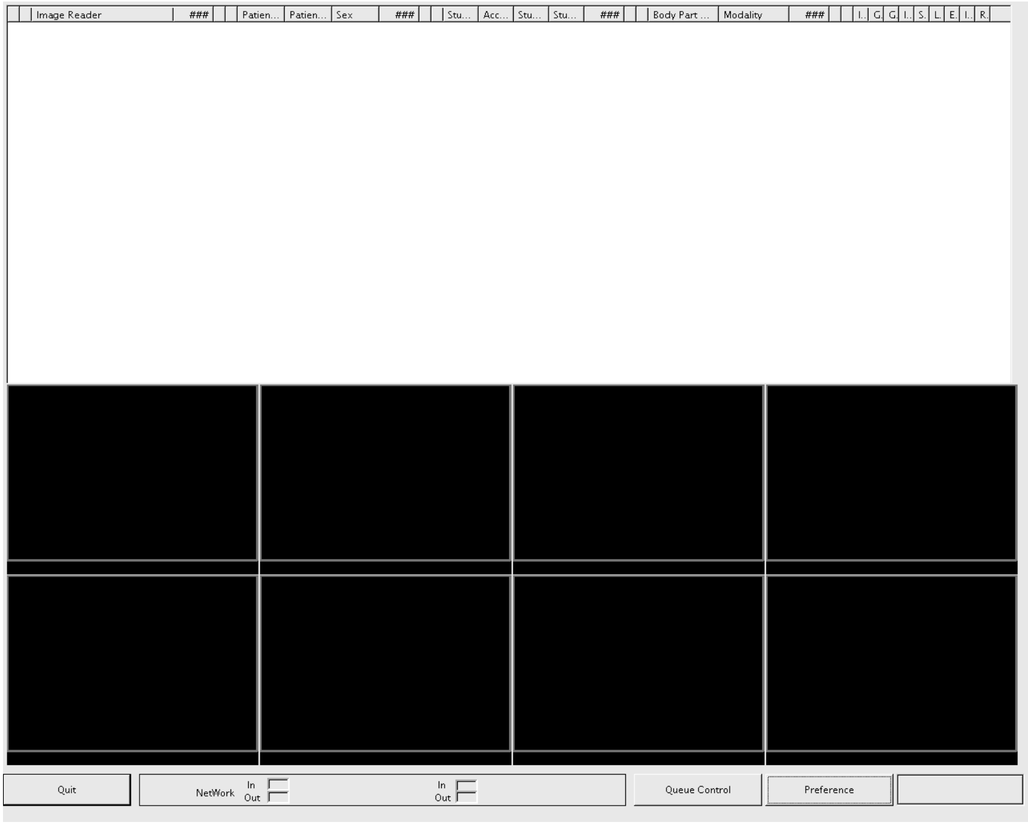


Image Reader
###
Patien...
Patien...
Sex
###
Stu...
Acc...
Stu...
Stu...
###
Body Part ...
Modality
###
I.
G.
G.
I.
S.
L.
E.
I.
R.
Quit
NetWork
In
Out
In
Out
Queue Control
Preference

Check that the connection hosts set above can be selected.

6.3 Setting the Recycle Bin (Software Version A05 or Later)

With software version A05, a new function has been made available, where images to be deleted are first put into the recycle bin, and then finally deleted (recycle bin function). This requires that a specific setup be made to determine whether or not to move improperly exposed images to the trash box automatically.

Set up this function discussing with the user.

(1) Start up the QA-WS.

(2) Click Preference .

➔ The [Preference] window opens.

(3) Check (☐ ➔ ☑) ☐ Move the failed image to recycle bin. .

(4) Click Save .

6.4 Checking User Operations

See the Operation Manual describing user operations to make sure that the required operations are possible.

7. Backing Up the Environment Setting Files

■ Prepare the following;

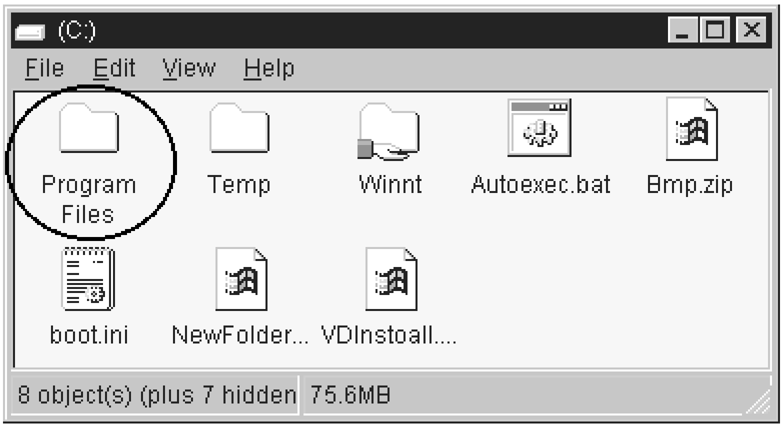
DOS formatted 3.5" FD

(1) Insert the FD in the FDD.

(2) Double-click "My Computer" on the Windows NT desktop.

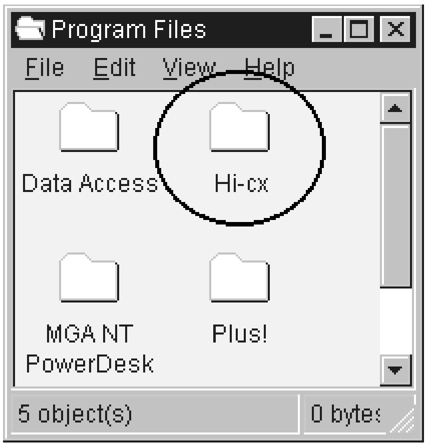
(3) Double-click "(C):".

(4) Double-click "Program Files".


(C:)
File Edit View Help
Program Files
Temp
Winnt
Autoexec.bat
Bmp.zip
boot.ini
NewFolder...
VDInstoall....

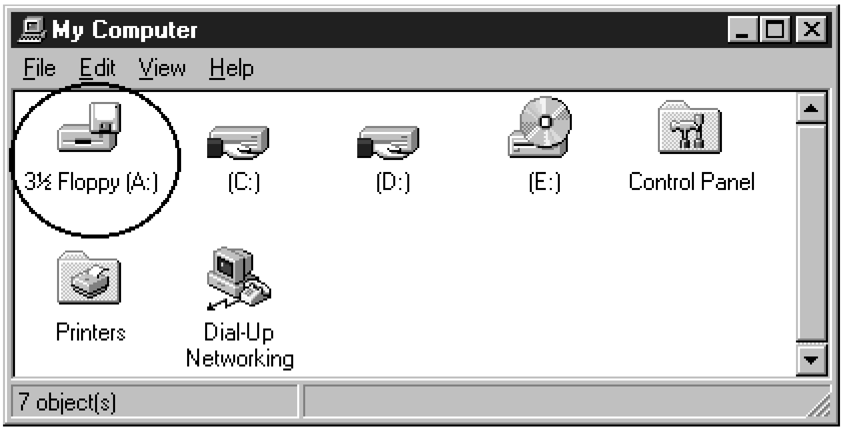
8 object(s) (plus 7 hidden 75.6MB

(5) Double-click "Hi-cx".


Program Files
File Edit View Help
Data Access
Hi-cx
MGA NT PowerDesk
Plus!

5 object(s) 0 bytes

(6) Return to the "My Computer" dialog box and double-click "3 1/2 Floppy (A:)".


My Computer
File Edit View Help
3½ Floppy (A:)
(C:)
(D:)
(E:)
Control Panel
Printers
Dial-Up Networking

7 object(s)

(7) Close all screens except "3 1/2 Floppy (A:)" and "Hi-cx".

(8) Drag the following files to "3 1/2 Floppy (A:)" and copy them.

◆ NOTE ◆

When the DICOM has been set up, the following three files will be newly created.

- *DICOM.env*
- *PN.env*
- *Tagvr.dat*

File Name	Information Stored	Set by FieldTool	Set by Editor
Attrdstb.env	Describes the relation between image attributes specified and the destination node (other nodes or units connected to these nodes) of the images corresponding to the image attributes.	O	×
Codedstb.env	Describes the relation between the distribution codes specified and the destination node (other nodes or units connected to these nodes) of the images corresponding to the distribution codes.	O	×
Comp.prm	Describes the relation between the exposure menu and image compression rate.	×	O
Connect.env	Describes the units connected to the other nodes on the network.	O	×
Cross.tbl	Describes the size of images which can be transferred between nodes.	×	Δ
Crtlut1.dat	Stores correction data for correcting the tonal conversion table of the 21" CRT monitor (first monitor).	×	O
Crtlut2.dat	Stores correction data for correcting the tonal conversion table of the 21" CRT monitor (second monitor).	×	O
Device.env	Describes the image attributes of the other nodes on the network and units connected by the FCR/DMS interface.	O	×
Fcrdms.env	Describes information related to units connected to the control unit by the FCR/DMS interface.	O	×
Fmtstd.prm	Specifies the usable formats when outputting files to the MF.	×	×
Grpmstr.env	Describes the QA-WS searched on the network.	O	×
Grpod.env	Describes the ODs searched on the network.	O	×
Grpslv.env	Describes this equipment searched on the network.	O	×
Hosts.env	Describes the relation between the names of the other nodes connected to the network communicating with the control unit and the IP address (also describes information on the control unit).	O	×
Hp.prm	Describes the relation between the exposure menu and hyper DRC and USM processing parameters.	×	O
Hpt.prm	Stores basic data on hyper processing.	×	O
Hw.env	Describes the settings of the control unit hardware.	O	×
Machin.tbl	Describes parameters of connectable nodes.	×	O
Modality.env	Describes the searchable modality names and the order of display.	O	×
Op.prm	Describes the relation between the exposure menu and DR compression and one-dimensional USM processing parameters.	×	O

File Name	Information Stored	Set by FieldTool	Set by Editor
Opt.prm	Stores basic data on DR compression and one-dimensional USM processing.	×	O
Pem.prm	Describes the relation between the exposure menu and PEM processing parameters.	×	O
Pemt.prm	Stores basic data on PEM processing.	×	O
Preset.prm	Describes preset parameter information on image processing conditions set by the user.	Δ	
Routine.env	Describes various settings related to the routine work of the user.	O	×
Service.env	Describes the service names, port numbers, and transport layer protocols for services available on the system.	O	×
Size.tbl	Describes the size of CR images which can be accepted.	×	O
Std.prm	Stores basic data on tonal conversion and spatial frequency processing.	×	O
Stdmenu.prm	Describes the relation between the exposure menu and tonal conversion and spatial frequency processing parameters.	×	O
Usracs.prm	Describes the user's access rights and password settings	Δ	×
DICOM.env	Stores setting information, that is necessary for the DICOM protocol, of the host and this equipment.	O	×
PN.env	Stores setting information required for conversion to the DICOM-conformed format.	O	×
Tagvr.dat	Stores definition information of the elements required for using the DICOM protocol.	×	O
DICOMPrint.env	This file is set up when using the DICOM Print Service. Describes environmental information for printout by the printer to be used.	×	O
ImgSize.env	This file is set up when the image size change has been enabled (when set to REQ_IMG_SIZE="SUPPORTED") for the DICOMPrint.env. Describes film output or image output setup.	×	O
FilmDst.env	This file is set up when the destination for film printout has been specified to each of the trays (when set to FILM_DESTINATION ="BIN_i") for the DICOMPrint.env file. Describes information for specifying the printer BIN number.	×	O
FilmStrFmt.env	This file is set up when the film annotation character format number has been specified (when a value set to "Fmt_ID") for the ImgSize.env file. Describes the film annotation character format to be printed out being composed into image data.	×	O
CopiedInf.dat		×	O
TagReplace.ini	Edits tag information. ⇒ "MAINTENANCE 5.2 Settings for Editing Tag Information"	×	O

◆ *NOTE* ◆

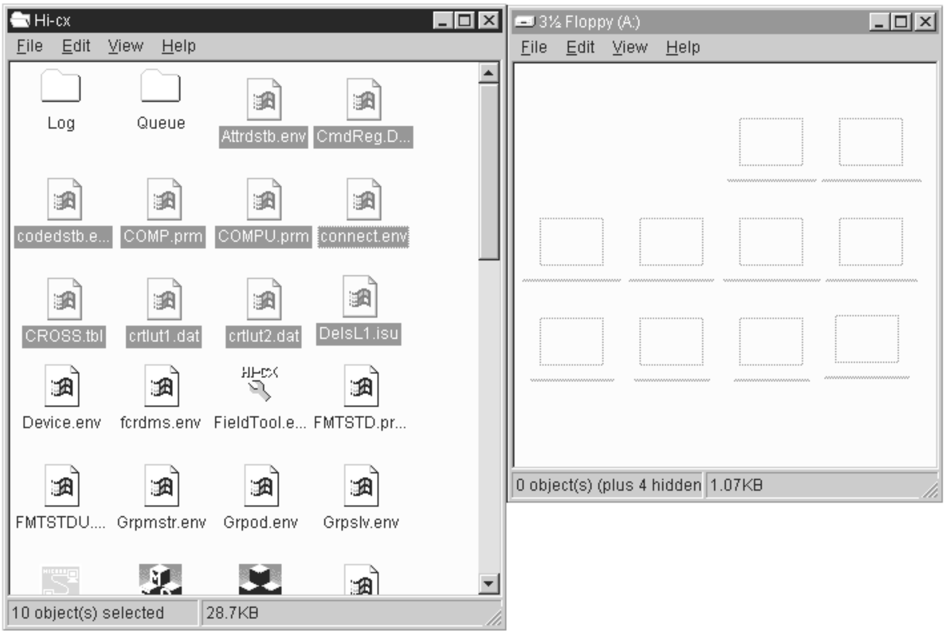
Editor Settings

O : *Can be changed by the text editor.*
× : *Changed by Field Tool.*
Δ : *Can be changed by the binary editor.*

● *Use the text editor with the Windows NT NOTEPAD (Memo) or WORDPAD. Do not use other editors (MS-WORD, etc.) to change the data as the format may change when the data is saved. However, use NOTEPAD for editing the FilmStrFmt file because it is a Unicode text file.*

● *The text editor cannot be used for binary files. When binary files are opened and saved using the text editor, the format may change because NULL is converted to Space and is disabled to use. Use the binary editor to change binary files.*

● *Files above which can be changed using Field Tool need not be changed by the text editor. Details on the definitions and contents of files which can be changed by the text editor will be provided in separate supplementary manuals.*


Hi-cx
File Edit View Help
Log
Queue
Attrdstb.env
CmdReg.D...
codedstb.e...
COMP.prm
COMPU.prm
connect.env
CROSS.tbl
crtlut1.dat
crtlut2.dat
DelsL1.isu
Device.env
fcrdms.env
FieldTool.e...
FMTSTD.pr...
FMTSTDU....
Grpmstr.env
Grpod.env
Grpslv.env
3½ Floppy (A:)
File Edit View Help

10 object(s) selected | 28.7KB

0 object(s) (plus 4 hidden | 1.07KB

(9) After copying, close the "3 1/2 Floppy (A:)" and "Hi-cx" dialog boxes.

(10) Remove the floppy disk.

8. Connecting/Setting the FCR/DMS Interface

8.1 Setting the DXA01A/PEI01A Boards

◆ NOTE ◆

The DXA01A board is available only for Precision 410.
For Precision 420, the DXA01A board cannot be attached because it is not provided with the ISA bus slot.

■ DXA01A Board Setup

In the QA-WS system, only one DXA01A board can be mounted in ISA bus slot.

Set up the jumpers and DIP switches on the board using the following procedure.

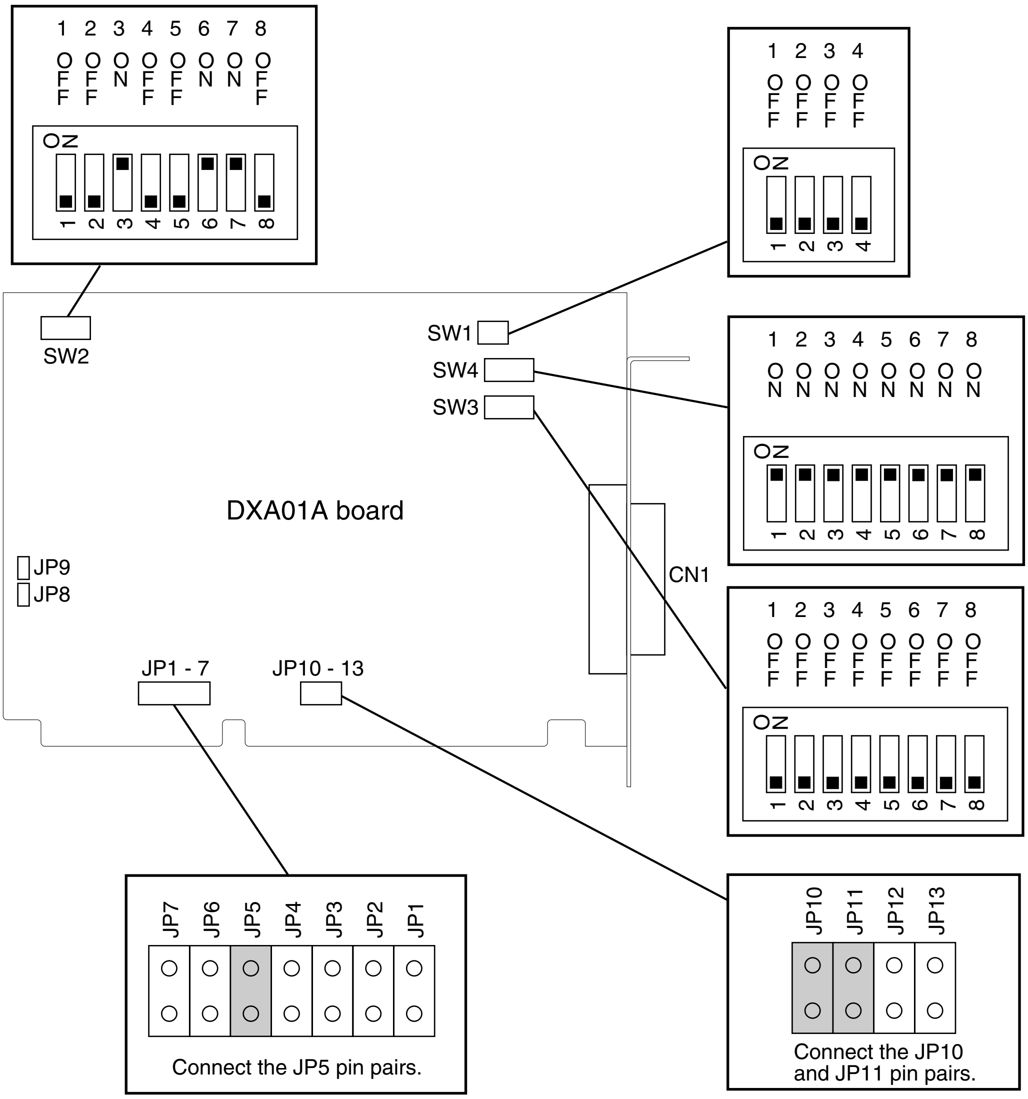

1 2 3 4 5 6 7 8
OFF OFF ON OFF OFF ON ON OFF
ON
1 2 3 4 5 6 7 8
SW2
1 2 3 4
OFF OFF OFF OFF
ON
1 2 3 4
SW1
SW4
SW3
1 2 3 4 5 6 7 8
ON ON ON ON ON ON ON ON
ON
1 2 3 4 5 6 7 8
DXA01A board
CN1
JP9
JP8
1 2 3 4 5 6 7 8
OFF OFF OFF OFF OFF OFF OFF OFF
ON
1 2 3 4 5 6 7 8
JP1 - 7
JP10 - 13
JP7 JP6 JP5 JP4 JP3 JP2 JP1
Connect the JP5 pin pairs.
JP10 JP11 JP12 JP13
Connect the JP10 and JP11 pin pairs.

Fig. Setting DXA01A Board

● DXA01A Board

Table. SW1 Settings (Remote signal switching)

No.	Setting	Description
1	OFF	● Because this device does not use remote signals, set all switches to their OFF positions. ❍ If remote signals come from an external source, set switches 1 and 2 to their ON positions and 3 and 4 to OFF. ❍ If the software generates remote signals for external devices, set switches 1 and 2 to their OFF positions and 3 and 4 to ON.
2	OFF	
3	OFF	
4	OFF	

Table. SW2 Settings

No.	Function	Setting	Description
1	Unused	OFF	
2	Unused	OFF	
3	I/O address SA9	ON	Specify the address space. • Set the following switches to their ON positions: #3 (SA9), #6 (SA6), and #7 (SA5).
4	I/O address SA8	OFF	
5	I/O address SA7	OFF	
6	I/O address SA6	ON	
7	I/O address SA5	ON	
8	Unused	OFF	

Table. SW3 and SW4 Settings (Configuration A/B switching)

	No.	Setting	Description
SW3	1 to 8	All OFF	● Because this equipment uses configuration B, set all SW3 switches to their OFF positions and all SW4 switches to their ON positions. ❍ Configuration A has all SW3 switches ON and all SW4 switches OFF. ❍ Configuration B has all SW3 switches OFF and all SW4 switches ON.
SW4	1 to 8	All ON	

Note: If the equipment is connected to a reader, use configuration B.

Table. Jumper (JP1 to JP13) Settings

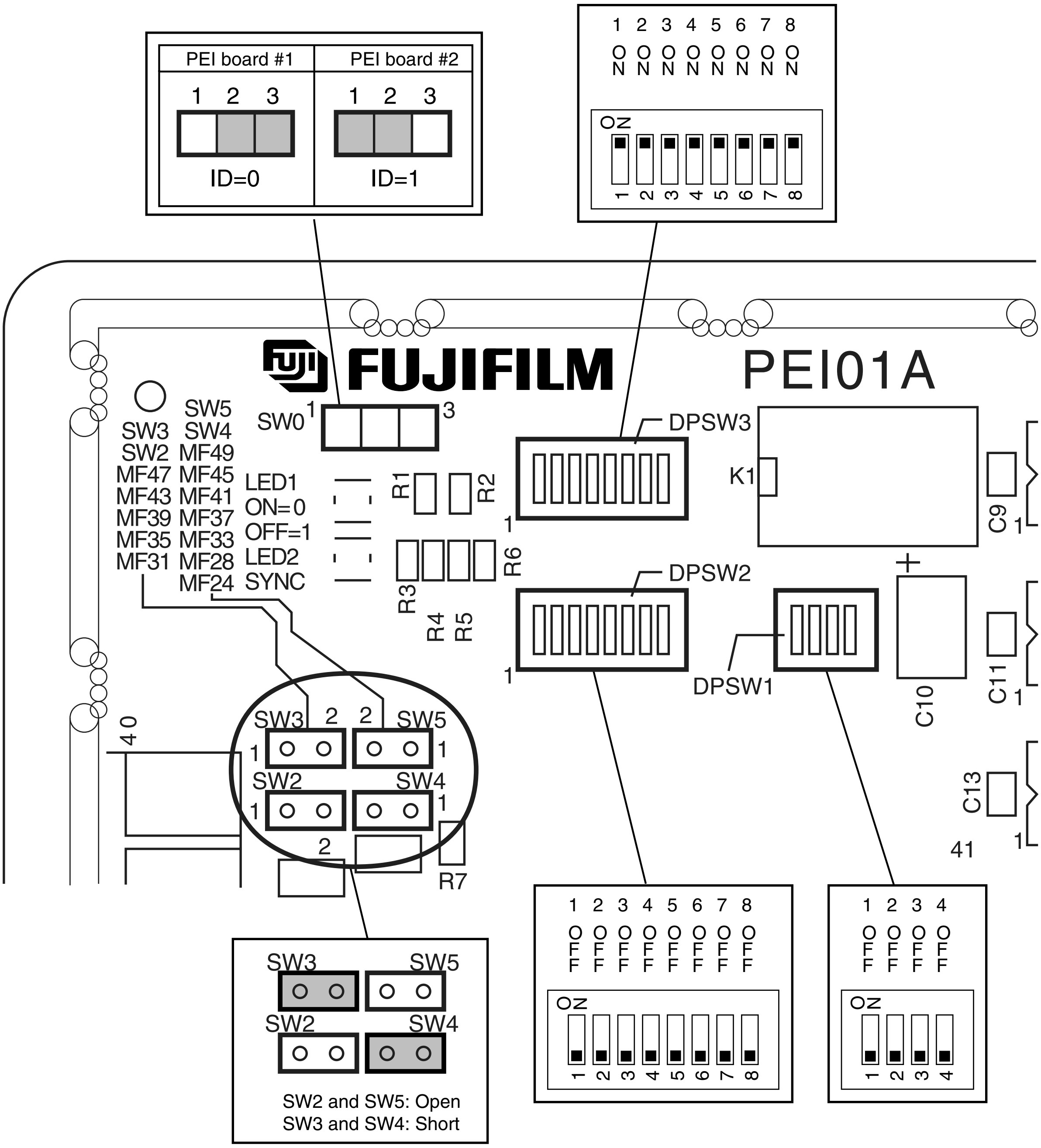
No.	Function	Setting	Description
1	ISA interrupt select IRQ10		These pins specify the ISA interrupt line. Short-circuit one pair: • #5 (IRQ5)
2	ISA interrupt select IRQ11		
3	ISA interrupt select IRQ12		
4	ISA interrupt select IRQ15		
5	ISA interrupt select IRQ5	Short	
6	ISA interrupt select IRQ4		
7	ISA interrupt select IRQ3		
8	Hardware configuration		These pins specify the FPGA clock: JP8 for 16 MHz; JP9 for 32 MHz. These pins are currently not provided, so the clock setting cannot be changed.
9	Hardware configuration		
10	E-I/F parity configuration	Short	● This device uses the normal configuration, short-circuiting pins 10 and 11. ❍ Short-circuiting pins 10 and 11 produces the normal configuration. ❍ Short-circuiting pins 12 and 13 reverses the parity.
11	E-I/F parity configuration	Short	
12	E-I/F parity configuration		
13	E-I/F parity configuration		

■ PEI01A Board Setup

In the QA-WS system, up to two PEI01A boards can be mounted in PCI bus slot.

Set up the jumpers and DIP switches on these boards using the following procedure.

- Set up the first as PEI board #1.
- Set up the second as PEI board #2.
- The following settings must be the same on both boards: DPSW1 - DPSW3 and SW2 - SW5.
- The following settings differ for the two boards: SW0.


PEI board #1
1 2 3
ID=0
PEI board #2
1 2 3
ID=1
1 2 3 4 5 6 7 8
ON ON ON ON ON ON ON ON
ON
1 2 3 4 5 6 7 8
FUJIFILM
PEI01A
SW5
SW3 SW4
SW2 MF49
MF47 MF45
MF43 MF41
MF39 MF37
MF35 MF33
MF31 MF28
MF24
SW0
1
3
LED1
ON=0
OFF=1
LED2
SYNC
R1
R2
R3
R4
R5
R6
DPSW3
K1
C9
DPSW2
DPSW1
C10
C11
C13
41
40
SW3 2 2 SW5
SW2 SW4
R7
1 2 3 4 5 6 7 8
OFF OFF OFF OFF OFF OFF OFF OFF
1 2 3 4
OFF OFF OFF OFF
SW3 SW5
SW2 SW4

SW2 and SW5: Open
SW3 and SW4: Short

Fig. PEI01A Board

● PEI01A Board

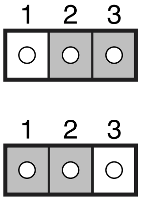
Table. DPSW1 Settings (Remote Signal Switching for Both Boards)

No.	Setting	Description
1	OFF	● Because this device does not use remote signals, set all switches to their OFF positions. ❍ If remote signals come from an external source, set switches 1 and 2 to their ON positions and 3 and 4 to OFF. ❍ If the software generates remote signals for external devices, set switches 1 and 2 to their OFF positions and 3 and 4 to ON.
2	OFF	
3	OFF	
4	OFF	

Table. DPSW2 and DPSW3 Settings (Configuration A/B Switching for Both Boards)

	No.	Setting	Description
SW2	1 to 8	All OFF	● Because this equipment uses configuration B, set all SW2 switches to their OFF positions and all SW3 switches to their ON positions. ❍ Configuration A has all SW2 switches ON and all SW3 switches OFF. ❍ Configuration B has all SW2 switches OFF and all SW3 switches ON.
SW3	1 to 8	All ON	

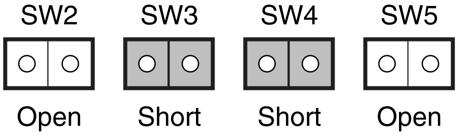
Note: If the equipment is connected to a reader, use configuration B.



2-3 short : Set PEI board #1 to ID = 0.

1-2 short : Set PEI board #2 to ID = 1.

Fig. SW2 Settings (Board ID Setting)



Set even parity for the QA-WS.
(CR-DMS)

Fig. SW2 - SW5 Settings (Parity Settings for Both Boards)

8.2 Connecting Cables

Connect the cables of the QA-WS and Image Reader.

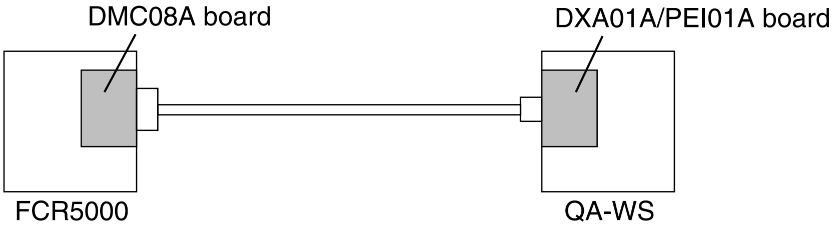
There are two methods of connecting.

[ ] shows the abbreviated product name.

■ Direct Connection Using Full Pitch/Half Pitch Cables

Select from the following cables and connect them.

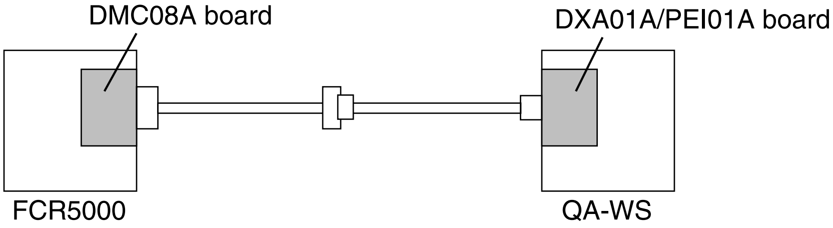
- FCR i/f Cablefi5m [ODF/PS IF CABLE 5 E]
- FCR i/f Cablefi15m [ODF/PS IF CABLE 15 E] (Standard)
- FCR i/f Cablefi30m [ODF/PS IF CABLE 30 E]
- FCR i/f Cablefi45m [ODF/PS IF CABLE 45 E]
- FCR i/f Cablefi60m [ODF/PS IF CABLE 60 E]
- FCR i/f Cablefi100m [ODF/PS IF CABLE 100 E]
- FCR i/f Cablefi150m [ODF/PS IF CABLE 150 E]


DMC08A board
DXA01A/PEI01A board
FCR5000
QA-WS

■ Connection Using Conversion Cables

Use the following cable for connection.

- 1.2m conversion cable [MS-PS 667/DMS IF CABLE E]


DMC08A board
DXA01A/PEI01A board
FCR5000
QA-WS

8.3 Setting Software

When newly installing the DXA/PEI board, follow the procedures below for making the E-I/F-connected devices available on the network.

In this section, the following abbreviations are used for convenience.

- Windows NT .... NT
- QA-WS application software .... AP

■ Uninstalling the QA-WS Application

◆ NOTE ◆

Be sure to back up the setup information for AP reinstallation after the QA-WS application has been uninstalled.

(1) Turn ON the power switch of the 21" CRT monitor and control unit.

(2) Start the unit.

◆ NOTE ◆

- *After starting the unit, the AP will start automatically after some time.*
  To prevent this, log onto Field Tool.
- *If you could not log onto Field Tool, end the AP and repeat from step (2) again.*

Logging onto Field Tool

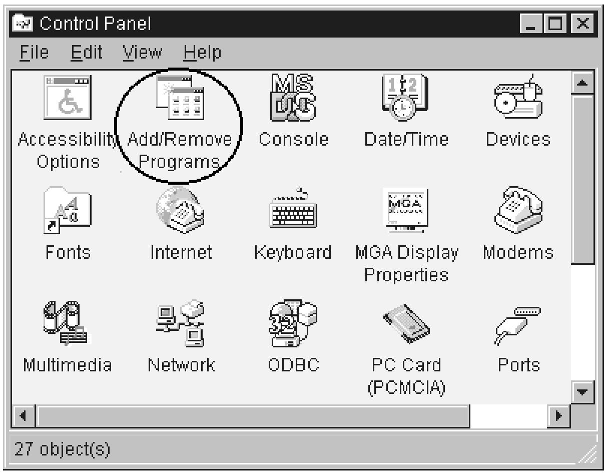
- The Start bar appears at the bottom of the screen when the unit is started.
- Continue pressing <Shift> key until the Field Tool screen appears.

(3) Select "10. Quit Field Tool" at the Field Tool: Main Menu and click [OK].

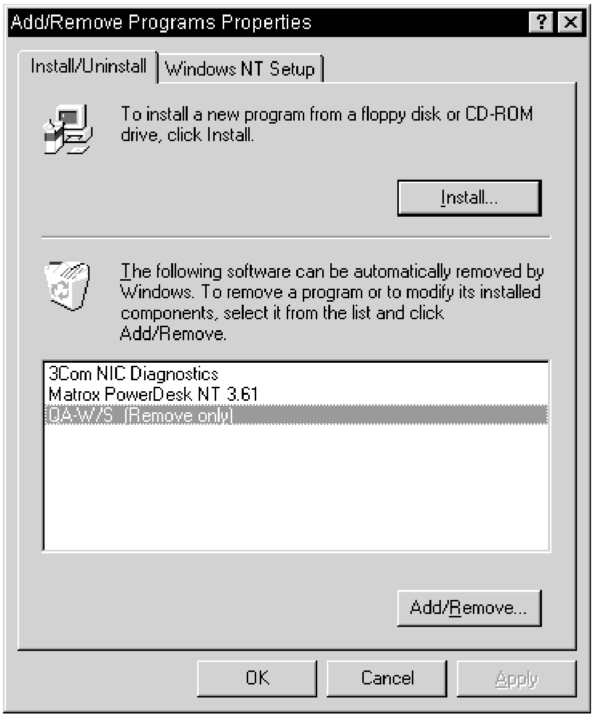
(4) Double-click "My Computer" on the Windows NT desktop.

(5) Double-click "Control Panel".

(6) Double-click "Add/Remove Programs".


Control Panel
File
Edit
View
Help
Accessibility Options
Add/Remove Programs
Console
Date/Time
Devices
Fonts
Internet
Keyboard
MGA Display Properties
Modems
Multimedia
Network
ODBC
PC Card (PCMCIA)
Ports
27 object(s)

(7) At the following dialog box that appears, select "QA-WS" and click [Add/Remove].



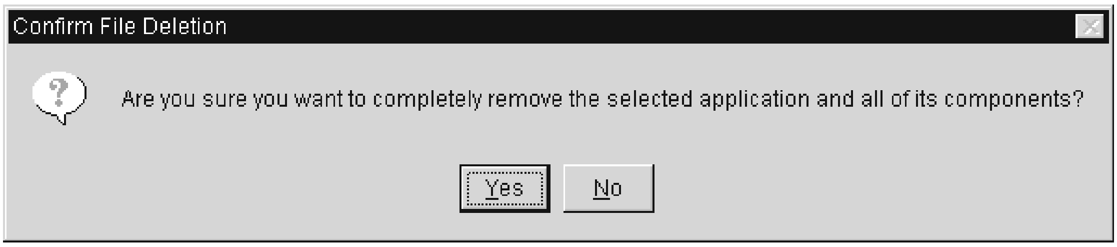
Add/Remove Programs Properties

To install a new program from a floppy disk or CD-ROM drive, click Install.

The following software can be automatically removed by Windows. To remove a program or to modify its installed components, select it from the list and click Add/Remove.

3Com NIC Diagnostics
Matrox PowerDesk NT 3.61
QA-W/S (Remove only)

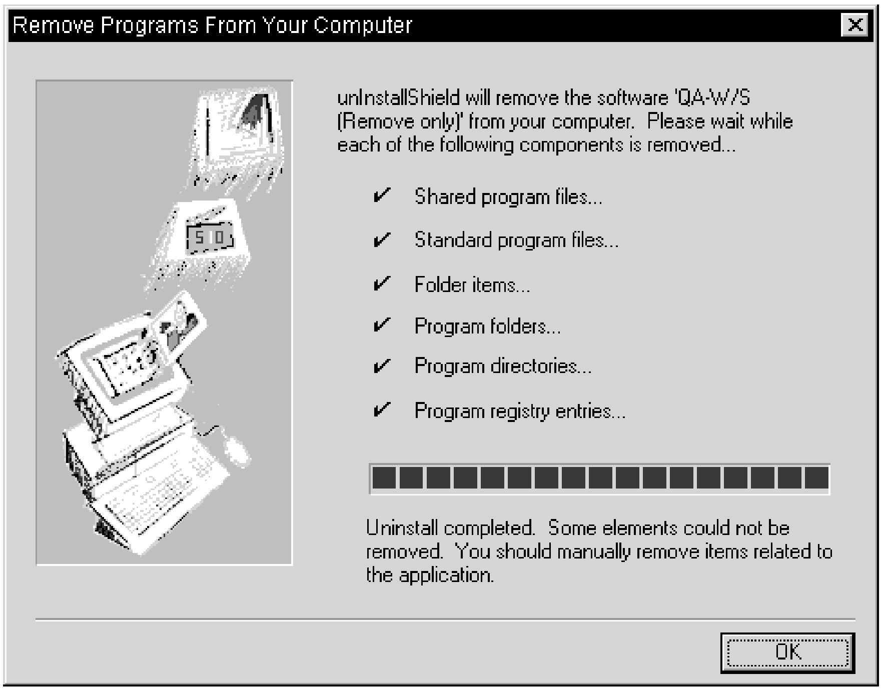
(8) Click [Yes].



Confirm File Deletion

Are you sure you want to completely remove the selected application and all of its components?

(9) A screen tracking the progress of the uninstallation appears.
When the process completes, click [OK].



Remove Programs From Your Computer

unInstallShield will remove the software 'QA-W/S (Remove only)' from your computer. Please wait while each of the following components is removed...

- ✔ Shared program files...
- ✔ Standard program files...
- ✔ Folder items...
- ✔ Program folders...
- ✔ Program directories...
- ✔ Program registry entries...

Uninstall completed. Some elements could not be removed. You should manually remove items related to the application.

■ Installing the QA-WS Application

● The following will be required for the installation:

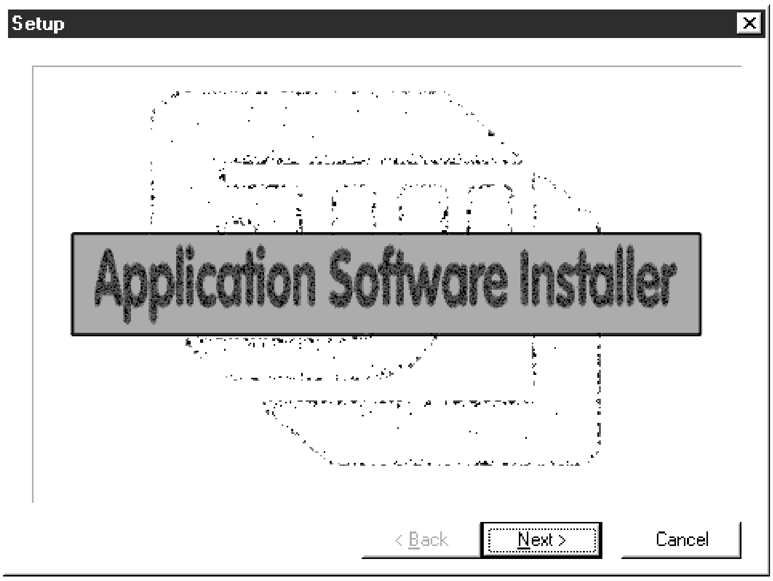
- QA-WS installation CD-ROM

◆ NOTE ◆

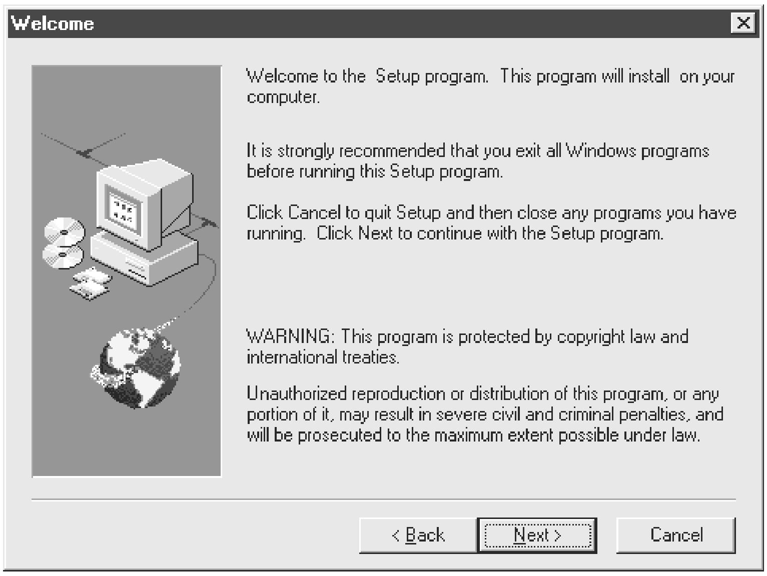
When reinstalling the AP, be sure to back up the required setting information.

(1) Insert the QA-WS installation CD-ROM in the CD-ROM drive.

(2) The CD-ROM starts automatically, and the following setup screen appears.
Click [Next>] to proceed.



(3) When the following Welcome screen appears, click [Next>] to proceed.



Welcome to the Setup program. This program will install on your computer.

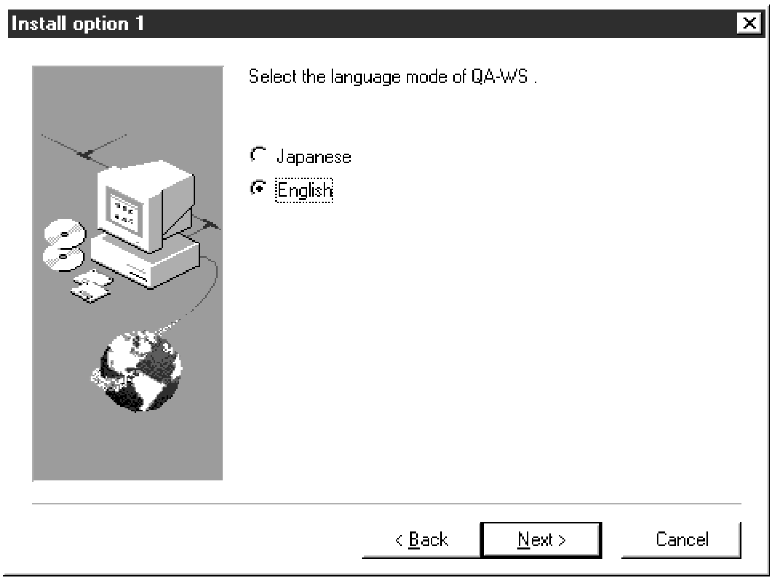
It is strongly recommended that you exit all Windows programs before running this Setup program.

Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

(4) At the following screen, select "English" to install an English AP, then click [Next>].



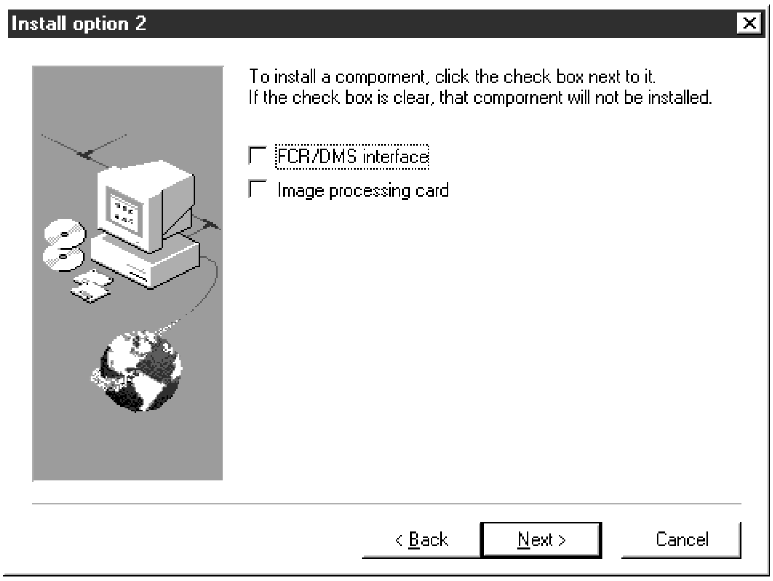
Install option 1

Select the language mode of QA-WS .

○ Japanese

● English

(5) Select the "FCR/DMS interface" check box to use E-i/f in the master unit, and click [Next>].



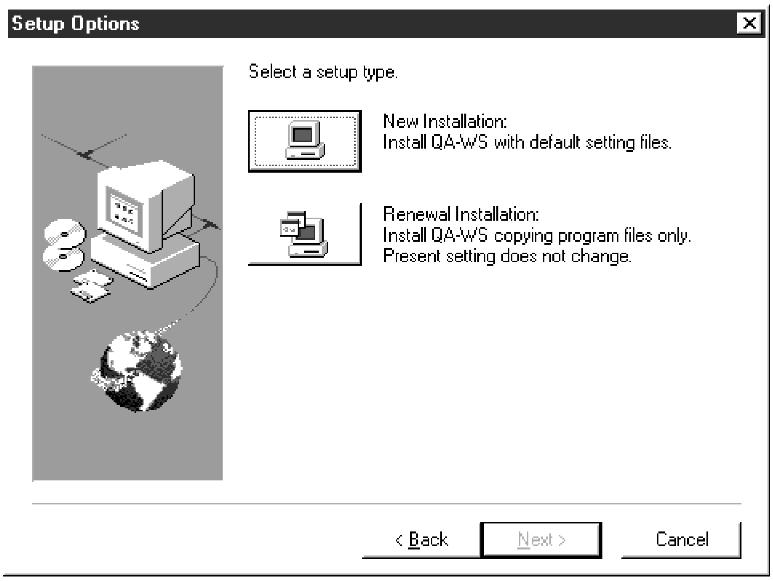
Install option 2

To install a compornent, click the check box next to it.
If the check box is clear, that compornent will not be installed.

☐ FCR/DMS interface

☐ Image processing card

(6) Click [New Installation].



Setup Options

Select a setup type.

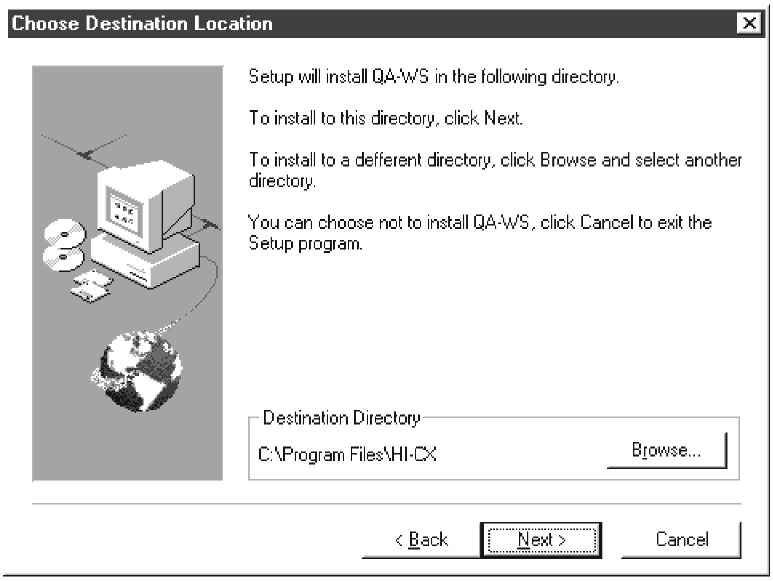
New Installation:
Install QA-WS with default setting files.

Renewal Installation:
Install QA-WS copying program files only.
Present setting does not change.

(7) Setup will confirm the directory to install the AP. Click [Next>].

◆ NOTE ◆

This setting must be C:\Program Files\HI-CX (default directory). Do not change it.



Choose Destination Location

Setup will install QA-WS in the following directory.

To install to this directory, click Next.

To install to a defferent directory, click Browse and select another directory.

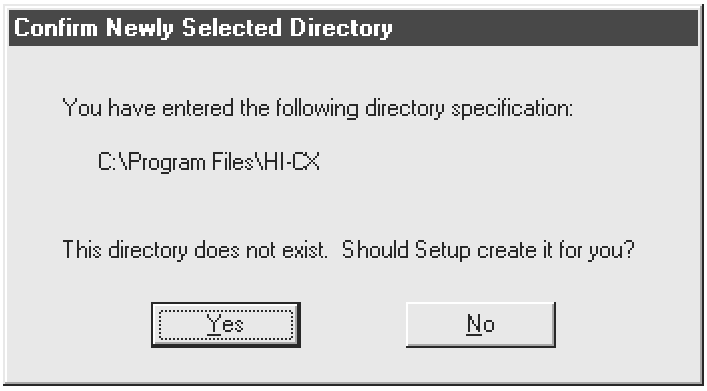
You can choose not to install QA-WS, click Cancel to exit the Setup program.

Destination Directory: C:\Program Files\HI-CX

(8) When the following screen appears, click [Yes].

◆ REFERENCE ◆

As the directory (C:\Program Files\HI-CX) does not exist in the HD (Drive C:) for new installations, Setup will confirm if it should create a directory indicated at the following screen.



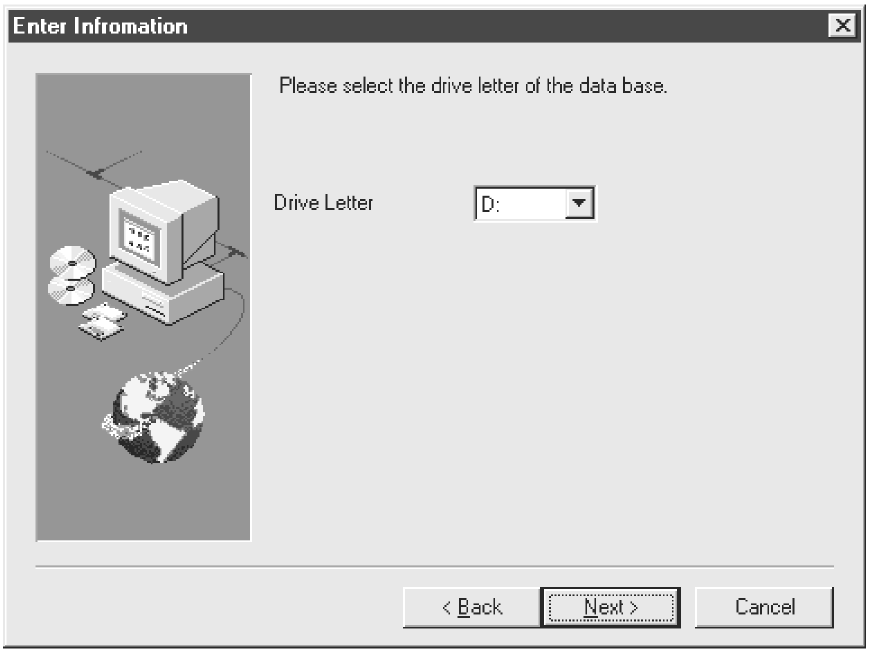
Confirm Newly Selected Directory

You have entered the following directory specification:

C:\Program Files\HI-CX

This directory does not exist. Should Setup create it for you?

(9) Make sure that "Drive Letter" is D:, and click [Next>].



Enter Infromation

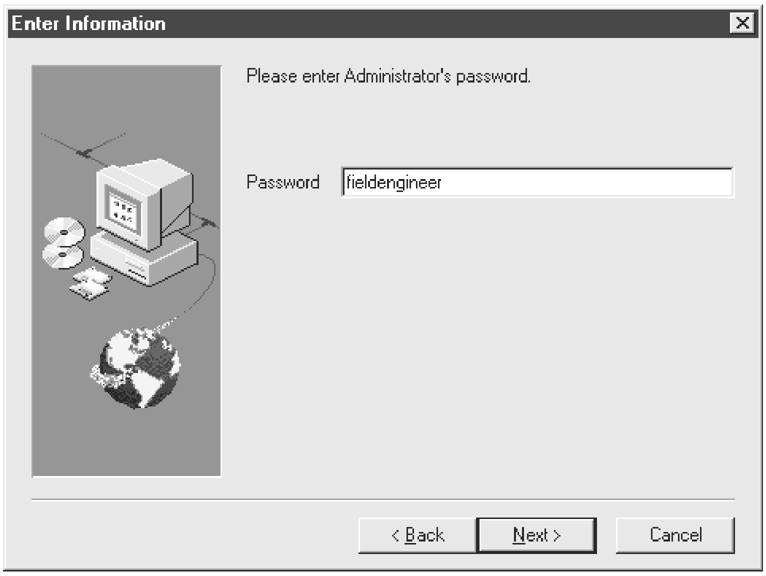
Please select the drive letter of the data base.

Drive Letter D:

(10) Enter the password "fieldengineer" (no quotes, spaces, or upper case) to enter Field Tool, and click [Next>].

◆ NOTE ◆

Be sure to enter the correct password ("fieldengineer") or it will not match the password at the "Logon Information" screen when NT is restarted, resulting in errors.
If this occurs, enter the correct password ("fieldengineer"), log onto NT, uninstall the AP and install it again.

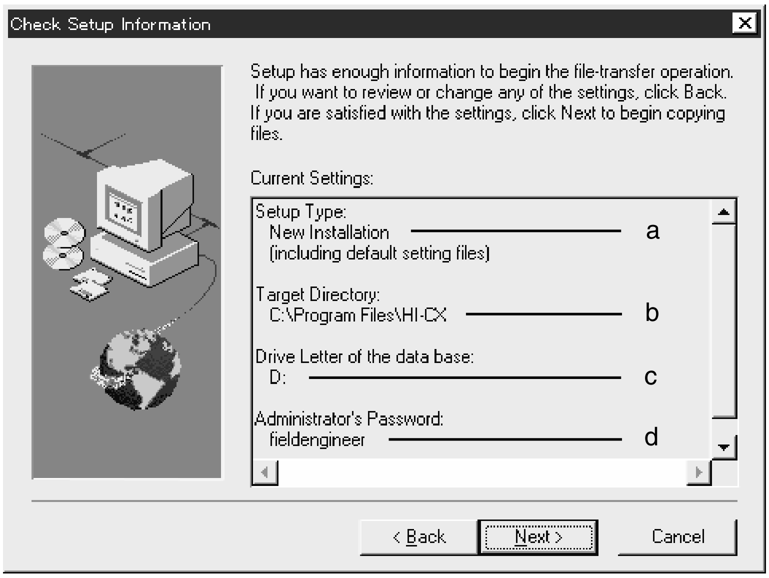


Enter Information

Please enter Administrator's password.

Password fieldengineer

(11) If the settings of “**a**” to “**d**” in the dialog box are exactly as shown below, click [Next>].



Check Setup Information

Setup has enough information to begin the file-transfer operation. If you want to review or change any of the settings, click Back. If you are satisfied with the settings, click Next to begin copying files.

Current Settings:

Setup Type:
New Installation
(including default setting files)

Target Directory:
C:\Program Files\HI-CX

Drive Letter of the data base:
D:

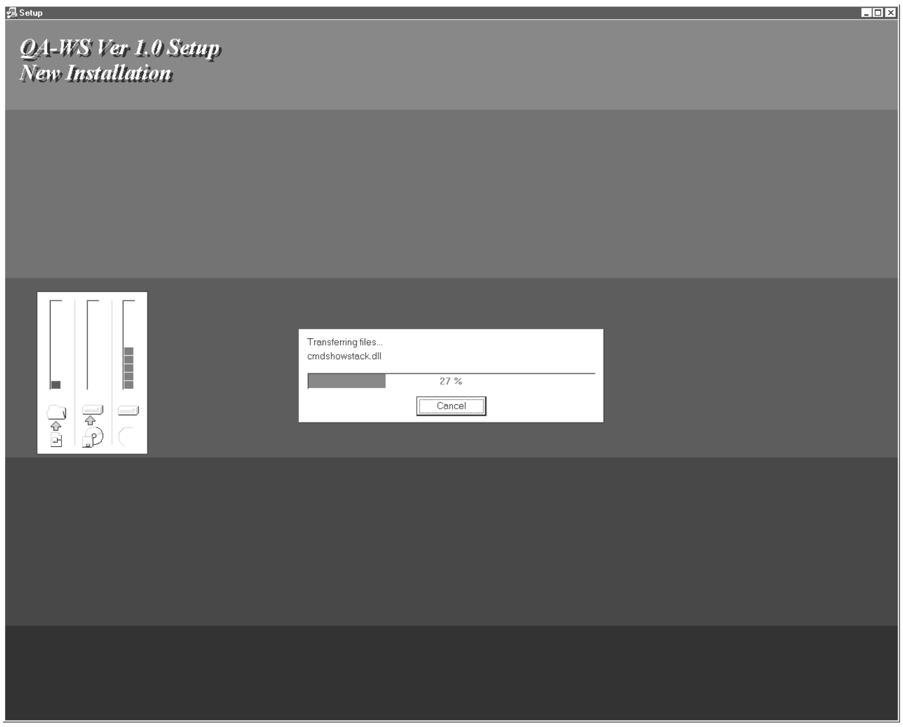
Administrator's Password:
fieldengineer

◆ NOTE ◆

- *If the settings are incorrect, click [<Back] to return to the previous step.*
- *The language selected will be displayed above "Setup Type".*

a	New Installation
b	C:\Program File\HI-CX
c	D:
d	Fieldengineer

(12) Installation starts, and indicators tracking progress are displayed.



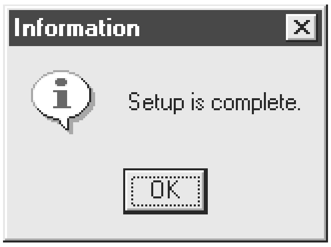
Setup

QA-WS Ver 1.0 Setup
New Installation

Transferring files...
cmdshowstack.dll

27 %

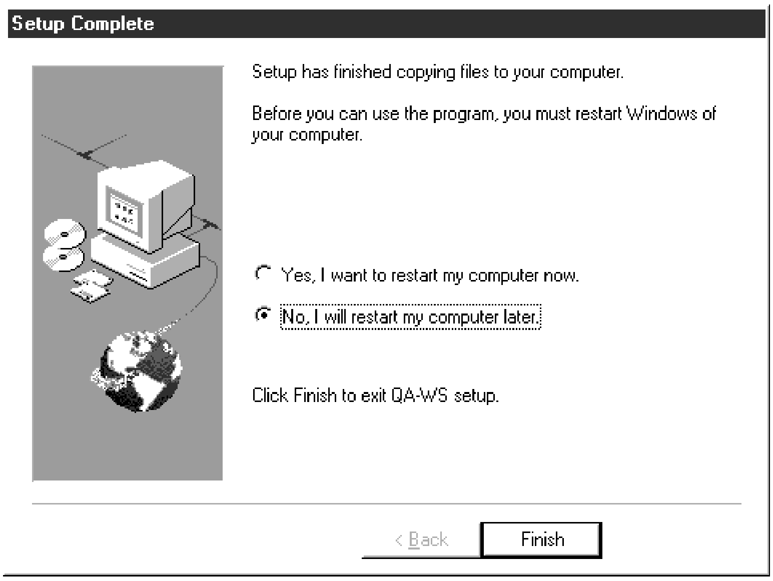
(13) When installation completes, click [OK].



Information

Setup is complete.

(14) When the "Setup Complete" dialog box appears, select the "No, I will restart my computer later" radio button and click [Finish].



Setup Complete

Setup has finished copying files to your computer.

Before you can use the program, you must restart Windows of your computer.

○ Yes, I want to restart my computer now.

● No, I will restart my computer later.

Click Finish to exit QA-WS setup.

(15) Remove the AP installation CD-ROM from the CD-ROM drive.

■ Installing the AP Key

◆ *NOTE* ◆

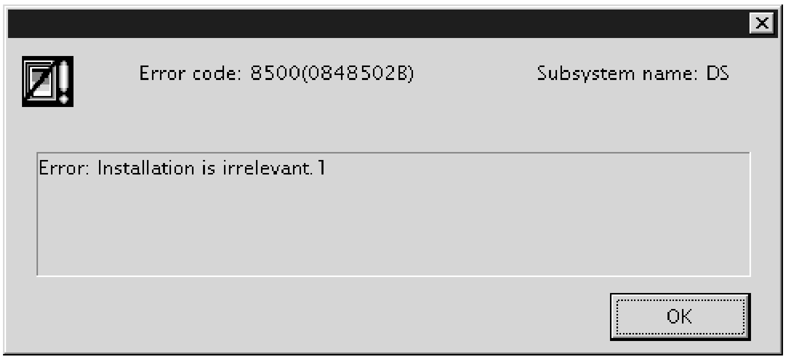
To add the DXA/PEI board at installation, perform the following procedure and install the AP key. Skip this procedure if the AP key is already installed.

● The following will be required for the installation:

- AP key registry CD-ROM

◆ *NOTE* ◆

During installation of the unit or after installing Windows NT, the following error message may appear because the key registry is not installed when the QA-WS application is started.
In this case, click [OK] and perform the following procedure.

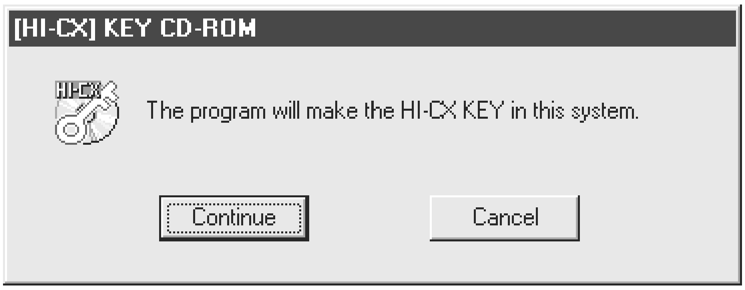


Error code: 8500(0848502B)   Subsystem name: DS

Error: Installation is irrelevant. 1

(1) Insert the CD-ROM with the AP key registry in the CD-ROM drive.

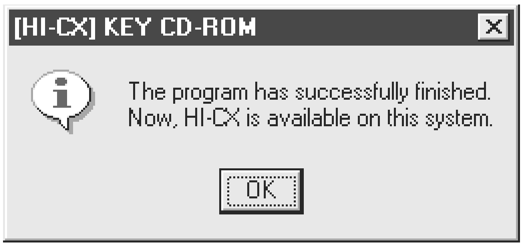
(2) The key registry program starts automatically.
At the start-up screen that appears, click [Continue].



[HI-CX] KEY CD-ROM

The program will make the HI-CX KEY in this system.

(3) Click [OK].



[HI-CX] KEY CD-ROM

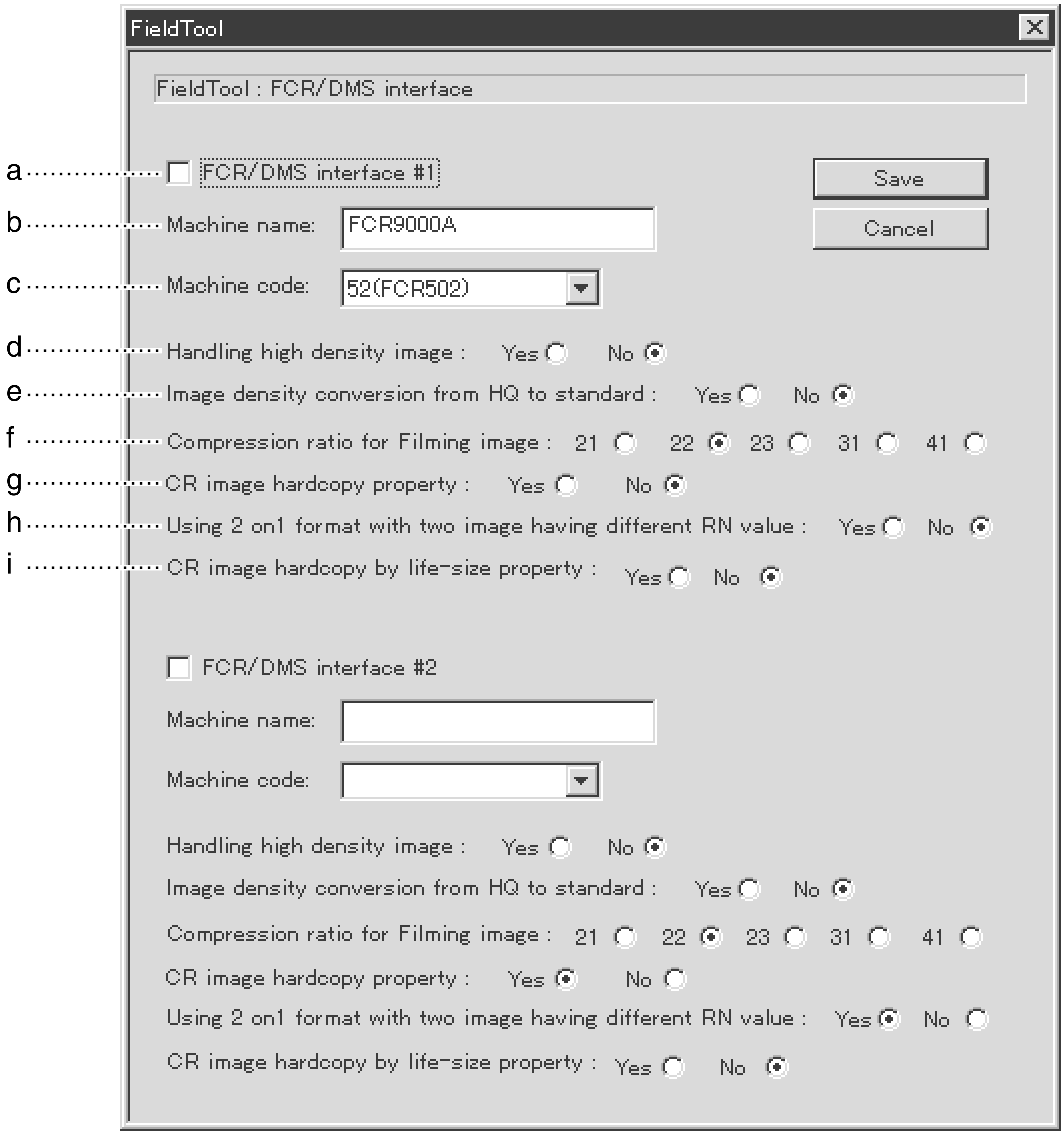
The program has successfully finished.
Now, HI-CX is available on this system.

(4) Remove the AP key registry CD-ROM.

■ Configuring the FCR/DMS Interfaces of the QA-WS Application

(1) Select the "3. FCR/DMS interface" radio button at the "Field Tool: Main Menu" dialog box, and click [OK].

(2) At the "FCR/DMS interface" dialog box, specify the FCR/DMS devices connected to the FCR/DMS interface #1 and #2.



☐ FCR/DMS interface #1
Machine name: FCR9000A
Machine code: 52(FCR502)
Handling high density image : Yes ○ No ●
Image density conversion from HQ to standard : Yes ○ No ●
Compression ratio for Filming image : 21 ○ 22 ● 23 ○ 31 ○ 41 ○
CR image hardcopy property : Yes ○ No ●
Using 2 on1 format with two image having different RN value : Yes ○ No ●
CR image hardcopy by life-size property : Yes ○ No ●

☐ FCR/DMS interface #2
Machine name:
Machine code:
Handling high density image : Yes ○ No ●
Image density conversion from HQ to standard : Yes ○ No ●
Compression ratio for Filming image : 21 ○ 22 ● 23 ○ 31 ○ 41 ○
CR image hardcopy property : Yes ● No ○
Using 2 on1 format with two image having different RN value : Yes ● No ○
CR image hardcopy by life-size property : Yes ○ No ●

a. Select the "FCR/DMS interface#1" radio button.
b. Enter the host (e.g.: FCR9000A).

◆ *REFERENCE* ◆

The host name entered can be up to 20 characters long and must consist of alphabets, numerals (capital) and hyphens.

c. Enter the appropriate machine code (e.g.:B1) for the device connected.

Set the machine codes as follows.

Device Name	Machine Code	Device Name	Machine Code
ODF613	A0	CR9000	B1
CR7000	A1	AC-3	B3
HIC652	A2	IPU515	B4
CR7501	A3	CR9501	B5
7000M	A4	CR9502	B7
7000D	A5	9501ES	B9
7501S	A6	5000	D1
AC-2	AC	5000R	D2
IPU514	AE	5501	D8
FCR502	52	DR11WT	FD
		DR11W	FE
		MODEM	FF

d. Specify whether the device connected accepts high density images from this equipment. (E.g.: No)

e. Specify whether to convert high density images to the standard density when this equipment sends images to other nodes on the network. (E.g.:No)

f. Select the code for the compression rate of the images sent from the host on the network for film output. (E.g.: 22)

The compression codes which can be selected are as follows.

Compression Ratio	Code
1:2 compression with 8-bit support	21
1:2 compression	22
1:12 compression	23
1:20 compression	31
1:5 compression	41

g. Specify whether the device can print CR images on film. (E.g: Yes)

h. When printing by the 2-image format, specify whether the device can process the image for printing the left and right images at different RNs.

i. Specify whether the device can process images for printing high density images (14" x 17" and 14" x 14") on 14" x 17" films at full size. (E.g.: No)

(3) Select the "FCR/DMS interface #2" radio button if the second device is connected to this equipment via the FCR/DMS interface.
After setting, click [Save].

8.4 Checking Operations

(1) Start the QA-WS application and check if images can be transferred.

9. Setting Up the DICOM Print Function

The DICOM Print Function outputs images to the printer using DICOM protocol.
For using the DICOM Print Function, the following four files must be set up in accordance with the type of printer connected to the user's system.

● DICOMPrint file (DICOMPrint.env)

This file must be set up at time of installation.
☞ 9.2, "Setting Up the DICOMPrint File"

❍ ImgSize file (ImgSize.env)

This file should be set up only when image size change has been enabled for the DICOMPrint file (when "SUPPORTED" has been set for "REQ_IMG_SIZE").
☞ 9.3, "Setting Up the ImgSize File"

❍ FilmStrFmt file (FilmStrFmt.env)

This file should be set up only when the film annotation character format number has been specified (when values have been set for "FMT_ID") for the ImgSize file.
☞ 9.4, "Setting Up the FilmStrFmt File"

❍ FilmDst file (FilmDst.env)

This file should be set up only when any printer tray has been specified for the film output destination (when "BIN_i" has been specified for "FILM_DESTINATION") for the DICOMPrint file.
☞ 9.5, "Setting Up the FilmDst File"

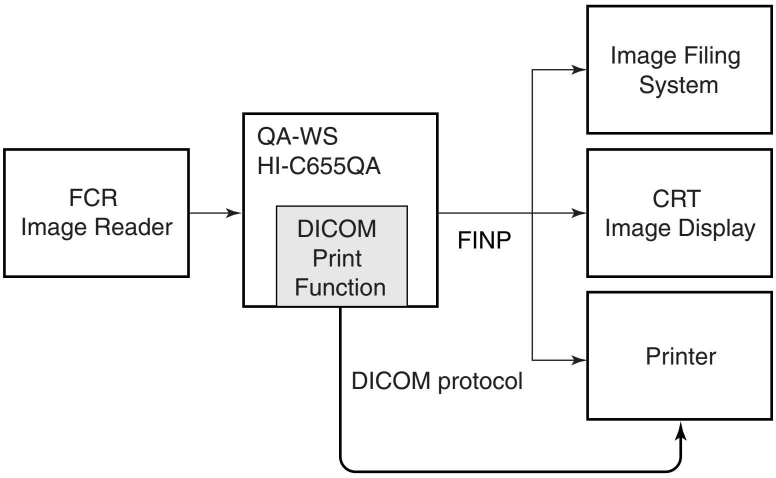
9.1 DICOM Print Function Overview

Following is an overview of the DICOM Print Function, presented in terms of the five points listed below. Read this section before setting up the DICOM Print Function.

- How does the DICOM Print Function work?
- DICOM Print Service support
- Generating and outputting film annotation characters
- Description of the DICOM Print Function
- Editing the DICOM Print setup files

■ How does the DICOM Print Function work?

This function uses DICOM protocol to output to printers images received from FCR Image Readers.


FCR
Image Reader
QA-WS
HI-C655QA
DICOM
Print
Function
FINP
Image Filing
System
CRT
Image Display
Printer
DICOM protocol

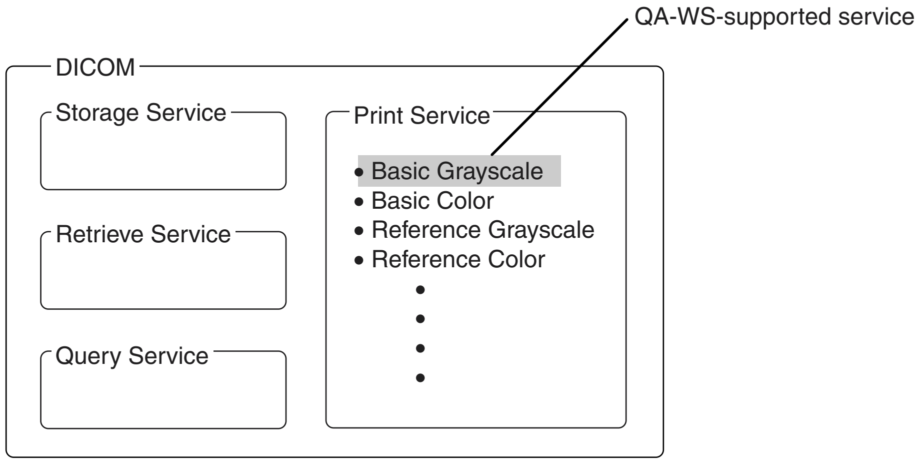
FR1B1026.EPS

QA-WS, which has DICOM Print Function, will have the printout function available for DICOM in addition to the FINP supported previously.

■ DICOM Print Service support

The DICOM Print Function uses the "DICOM Print Service," a DICOM protocol service.

The DICOM Print Service consists of several service classes. The DICOM Print Function supports "DICOM Basic Grayscale Print Management Meta SOP Class SCU," which is one of these service classes.


QA-WS-supported service
DICOM
Storage Service
Retrieve Service
Query Service
Print Service
• Basic Grayscale
• Basic Color
• Reference Grayscale
• Reference Color

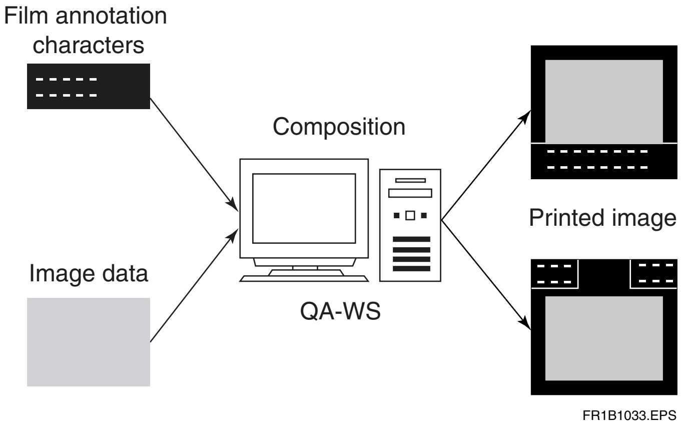
FR1B1027.EPS

"DICOM Basic Grayscale Print Management Meta SOP Class SCU" is a service class that provides basic services for outputting gray scale images to the printer using DICOM protocol.

■ Generating and outputting film annotation characters

The DICOM Print Function makes it possible to add character data to image data.
This character data (film annotation characters) can be extracted and generated from image information that includes the patient ID and date of exposure. It can also be generated from information set up on the QA-WS.

When image data that includes film annotation characters are output to the printer, film annotation characters are first converted to image data and then combined with the image data to be output. For this reason, the printer will handle character data as part of the image data.

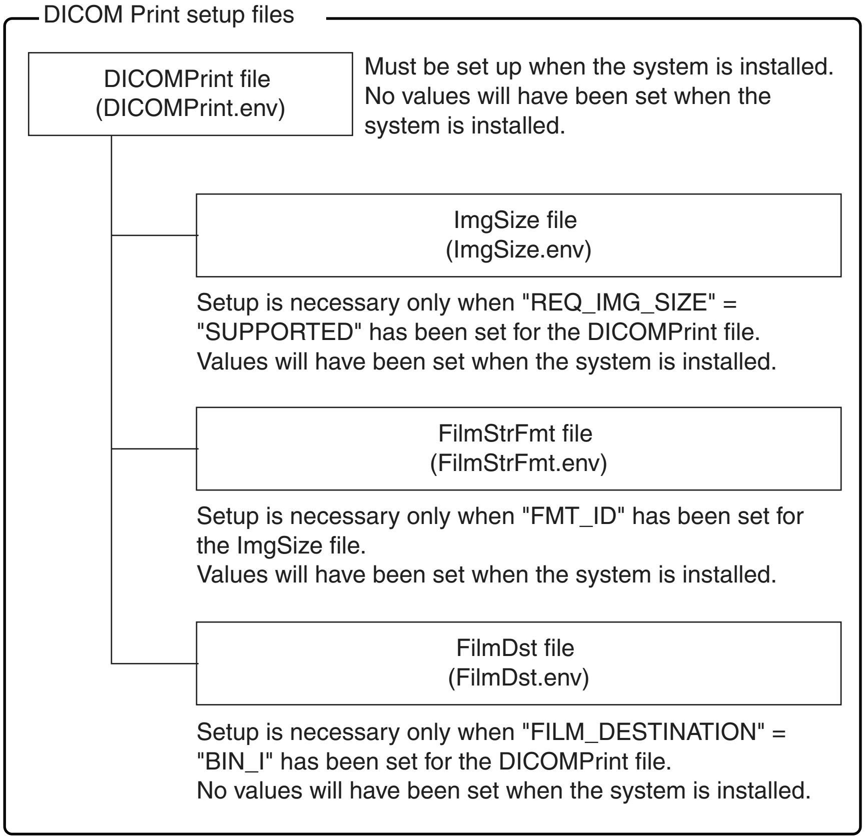

Film annotation characters
Composition
Printed image
Image data
QA-WS
FR1B1033.EPS

■ Description of the DICOM Print Function

For using the DICOM Print Service, the information on usage environment for the appropriate printer must be set in accordance with the user's system configuration.

Requested image size, film destination and film annotation character format must also be set, in accordance with the printer's usage environment and the user's requirements.

This can be done by rewriting the four print setup files listed below.


DICOM Print setup files
DICOMPrint file
(DICOMPrint.env)
ImgSize file
(ImgSize.env)
FilmStrFmt file
(FilmStrFmt.env)
FilmDst file
(FilmDst.env)

DICOMPrint file (DICOMPrint.env): Must be set up when the system is installed. No values will have been set when the system is installed.

ImgSize file (ImgSize.env): Setup is necessary only when "REQ_IMG_SIZE" = "SUPPORTED" has been set for the DICOMPrint file. Values will have been set when the system is installed.

FilmStrFmt file (FilmStrFmt.env): Setup is necessary only when "FMT_ID" has been set for the ImgSize file. Values will have been set when the system is installed.

FilmDst file (FilmDst.env): Setup is necessary only when "FILM_DESTINATION" = "BIN_I" has been set for the DICOMPrint file. No values will have been set when the system is installed.

FR1B1028.EPS

■ Editing the DICOM Print setup files

Because the Print setup files are in text format, it can be rewritten using the Windows NT Text Editor.

The aforementioned files are stored in the same directory as the QA-WS operation file ("C:\Program Files\Hi-cx").

◆ *NOTE* ◆

Note that how to set up the ImgSize file is different with each other for software version A04 or earlier and A05 or later.

- *A04 or earlier*

  ImgSize file (ImgSize.env) .... A value that is for the FN-PS is described as the default. To change the default value, rewrite the default value of this file or add only the difference from the default value.

- *A05 or later*

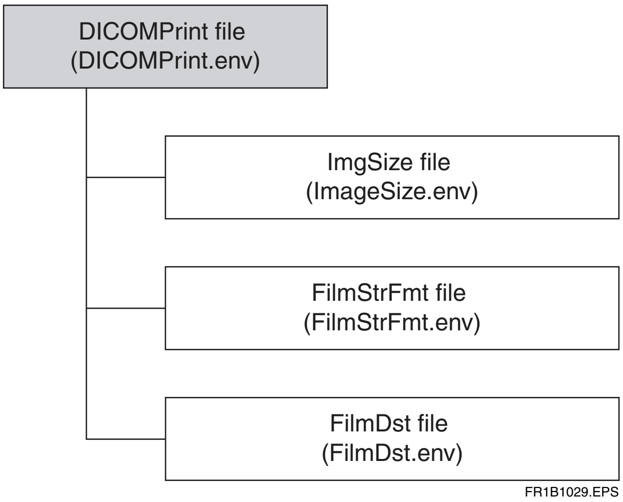
  ImgSizeD file (ImgSizeD.env) .... A value that is for the FN-PS is described as the default. Unchangeable.

  ImgSize file (ImgSize.env) .... To change the default value, add only the difference from the default value to this file.

9.2 Setting Up the DICOMPrint File

DICOMPrint.env stores the output environment information on the printer to be used.

This file is stored in the same directory as the QA-WS operation file ("C:\Program Files\Hi-cx").

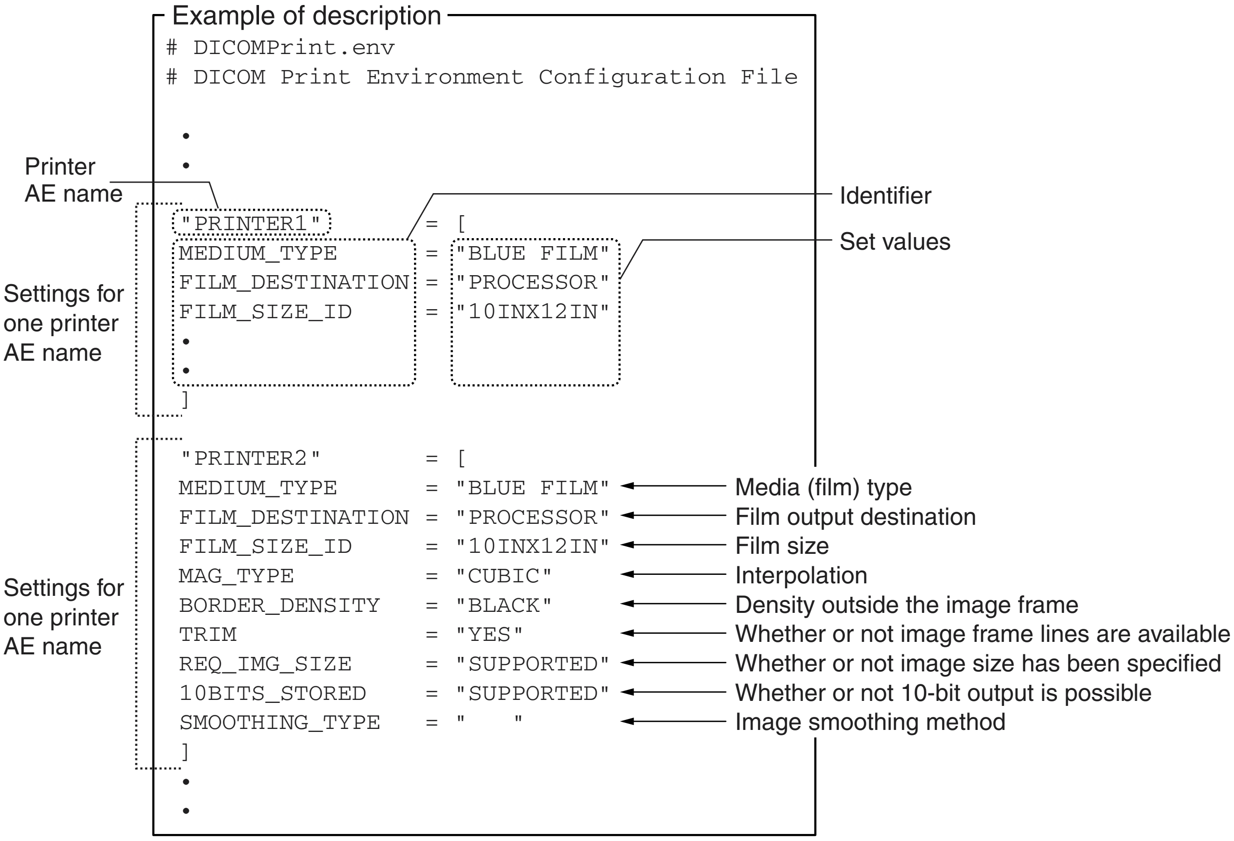

DICOMPrint file
(DICOMPrint.env)
ImgSize file
(ImageSize.env)
FilmStrFmt file
(FilmStrFmt.env)
FilmDst file
(FilmDst.env)
FR1B1029.EPS

After the optional Print Service software has been installed, the setup content will not be described in the DICOMPrint file. For this reason, describe the setup content in the DICOMPrint file in accordance with the type of the printer to be used.
If no setup is described in the DICOMPrint file, the printer's setup will be applied.

Describe the printer's usage environment information in the file for each of the printer's application entities (AEs hereinafter). When using a multiple number of printers or multiple number of AEs for one printer, you must set the printer's usage environment information for all AEs used.

9.2.1 DICOMPrint File Description Format

Following is the DICOMPrint file description format.



```
# DICOMPrint.env
# DICOM Print Environment Configuration File

 •
 •
 "PRINTER1"          = [
 MEDIUM_TYPE         = "BLUE FILM"
 FILM_DESTINATION    = "PROCESSOR"
 FILM_SIZE_ID        = "10INX12IN"
 •
 •
 ]

 "PRINTER2"          = [
 MEDIUM_TYPE         = "BLUE FILM"
 FILM_DESTINATION    = "PROCESSOR"
 FILM_SIZE_ID        = "10INX12IN"
 MAG_TYPE            = "CUBIC"
 BORDER_DENSITY      = "BLACK"
 TRIM                = "YES"
 REQ_IMG_SIZE        = "SUPPORTED"
 10BITS_STORED       = "SUPPORTED"
 SMOOTHING_TYPE      = "   "
 ]
 •
 •
```

Example of description
Printer AE name
Identifier
Set values
Settings for one printer AE name
Settings for one printer AE name
Media (film) type
Film output destination
Film size
Interpolation
Density outside the image frame
Whether or not image frame lines are available
Whether or not image size has been specified
Whether or not 10-bit output is possible
Image smoothing method

FR1B1042.EPS

Details on each setting follow.

❍ Printer AE name

AE name of the printer.

❍ Identifier

Character string specified for each setting

- Media type
  Type of the media to be output.
- Film output destination
  Film output destination (magazine, processor or printer tray).
- Film size
  Size of film to be output.
- Interpolation
  Image interpolation method used.
- Density outside the image frame
  Density used when the outside of the image frame has been painted out.
- Image frame lines
  Whether or not image frame lines are available.
- Specifying image size
  Whether or not image size can be changed.
- 10-bit data output
  Whether or not 10-bit image data can be output.

❍ Set values

Values possible for each setting.

■ Cautions in editing the DICOMPrint file

Following are the cautions to be observed when editing the DICOMPrint file.

- No specific order is required for describing settings.
- Use one line per setting. A line change will serve as the delimiter code.
- If a single setting is made more than once, the first setting will be the valid one.
- "#" at the beginning of a line indicates a comment line.
- Spaces and/or tabs before and after a set value will be disregarded.
- Do not use any tabs or change lines between an identifier and a set value.

9.2.2 Describing the DICOMPrint File

Description of some of the DICOMPrint file's settings is mandatory, while description of others is optional. If no description is made for a setting, the printer's setting will be used.

■ Setting the media type (optional)

Describe the type of media to be output in accordance with the printer (destination).

Media type	Setup item
Blue film	MEDIUM_TYPE="BLUE FILM"
Clear film	MEDIUM_TYPE="CLEAR FILM"
(Paper	MEDIUM_TYPE="PAPER")

■ Setting the film output destination (optional)

Describe the destination for film output in accordance with the type of printer (destination).

Output destination	Setting
Magazine	FILM_DESTINATION="MAGAZINE"
Processor	FILM_DESTINATION="PROCESSOR"
Printer tray	FILM_DESTINATION="BIN_i"

When "BIN_i" has been set, the BIN number (i) set in the FilmDst file will be calculated.

◆ *NOTE* ◆

When "BIN_i" has been set for the film output destination, be sure to set the data necessary for calculating the BIN number for the FilmDst file.

■ Setting up the film size (optional)

Describe the film size in accordance with the type of printer (destination).

Film size	Setup
8"×10"	FILM_SIZE_ID = “8INX10IN”
10"×12"	FILM_SIZE_ID = “10INX12IN”
10"×14"	FILM_SIZE_ID = “10INX14IN”
11"×14"	FILM_SIZE_ID = “11INX14IN”
14"×14"	FILM_SIZE_ID = “14INX14IN”
14"×17"	FILM_SIZE_ID = “14INX17IN”
24×24cm	FILM_SIZE_ID = “24CMX24CM”
24×30cm	FILM_SIZE_ID = “24CMX30CM”
11"×14" or 14"×17"	FILM_SIZE_ID= “SPEC_CR1” or “SPEC_CR2”

☞ For details on the function for “SPEC_CR1” or “SPEC_CR2”, see “2.3 Using the SPEC_CR1 or SPEC_CR2 Setup” in Appendix B “Setup for DICOM Print Output from QA-WS to FN-PS551.

◆ *NOTE* ◆

For the FN-PS, either of “11IN×14IN”, “14IN×17IN”, “SPEC_CRI” or “SPEC_CR2” can be specified.

■ Setting the image interpolation method (optional)

Describe the image interpolation method in accordance with the type of printer (destination).

Image interpolation	Setting
Replication method	MAG_TYPE = “REPLICATE”
Bilinear method	MAG_TYPE = “BILINEAR”
Cubic method	MAG_TYPE = “CUBLIC”
No interpolation	MAG_TYPE = “NONE”

■ Setting the image smoothing method (optional)

Describe the image smoothing method in accordance with the type of printer (destination).
This setting will be valid when the cubic method has been selected for image interpolation.

Setup item
SMOOTHING_TYPE="Arbitrary character string"

◆ *IMPORTANT* ◆

For the setting's "Arbitrary character string" describe the character string defined in the Conformance Statement for the printer at the output destination.

■ Setting the density outside the image frame (optional)

In view of the DICOM definition, density input is required here even though all settings made on the QA-WS are disabled because settings have been enabled on the Image Reader.

Density outside the image frame	Setting
Color darker than the image	BORDER_DENSITY = “BLACK”
Color lighter than the image	BORDER_DENSITY = “WHITE”

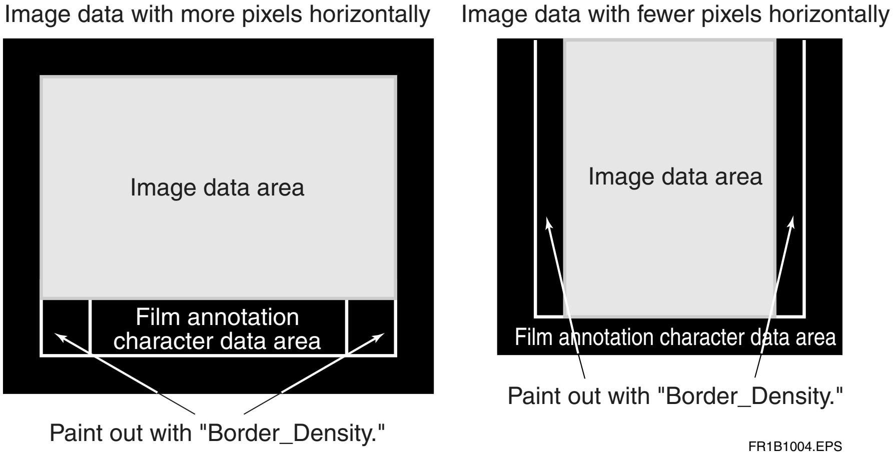


Image data with more pixels horizontally
Image data area
Film annotation character data area
Paint out with "Border_Density."
Image data with fewer pixels horizontally
Image data area
Film annotation character data area
Paint out with "Border_Density."
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■ Setting whether or not to make frame lines available (optional)

Frame lines	Setting
Frame lines available	TRIM = “YES”
Frame lines not available	TRIM = “NO”

■ Enabling changes in image size (mandatory)

Set whether or not to enable changes in the size of an image to be printed on film in accordance with the type of printer at the output destination.
Make sure to set either of the following.

Change image size or not	Setting
Enables changes in image size	REQ_IMG_SIZE = “SUPPORTED”
Disables changes in image size	REQ_IMG_SIZE = “UNSUPPORTED”

◆ NOTE ◆

- *When using a printer for which changes in image size have been enabled, we recommend that you set "REQ_IMG_SIZE" to "SUPPORTED."*
- *If "REQ_IMG_SIZE" has been set to "SUPPORTED," make sure to set up the ImgSize file.*

■ Outputting 10-bit images (mandatory)

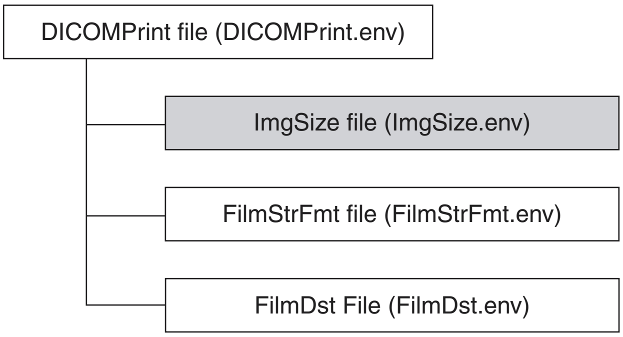
Set whether or not to print 10-bit images on film in accordance with the type of printer at the output destination.

10-bit image output	Setting
Output 10-bit images	10BITS_STORED = “SUPPORTED”
Do not output 10-bit images	10BITS_STORED = “UNSUPPORTED”

9.3 Setting Up the ImgSize File

The ImgSize file (ImgSize.env) must only be set up when a change in image size has been made possible for the DICOMPrint file (when "REQ_IMG_SIZE" has been set to "SUPPORTED").

Set in the ImgSize file the size and magnification/reduction rate for the image to be printed on film, the format number for viewing film annotation characters and whether or not to reduce the number of pixels.


DICOMPrint file (DICOMPrint.env)
ImgSize file (ImgSize.env)
FilmStrFmt file (FilmStrFmt.env)
FilmDst File (FilmDst.env)

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Set the ImageSize file values for each of the Application Entities (AEs hereinafter) allotted for each printer. If using a multiple number of printers or a multiple number of AEs for one printer, set values for all AEs used.

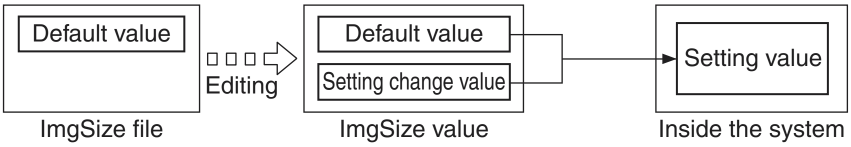
Note that the default value is set up under the AE name of "DEFAULT_SIZE". You need not to set up the ImgSize file if the default value thus set up has no problems for operations.

Functions and how to set up the ImgSize file are different with each other as follows for software version A04 or earlier and A05 or later.

● A04 or earlier

As the default, a value that is for the FN-PS is described in the ImgSize file. To change the default value, describe the setup content (setting change value) in the ImgSize file depending on the type of the printer to be used.

After the completion of installation of the Print Service software (optional), nothing has been set up in the ImgSize file. In the ImgSizeD file, a value that is for the FN-PS is described as the default.


Default value
Editing
Default value
Setting change value
Setting value
ImgSize file
ImgSize value
Inside the system

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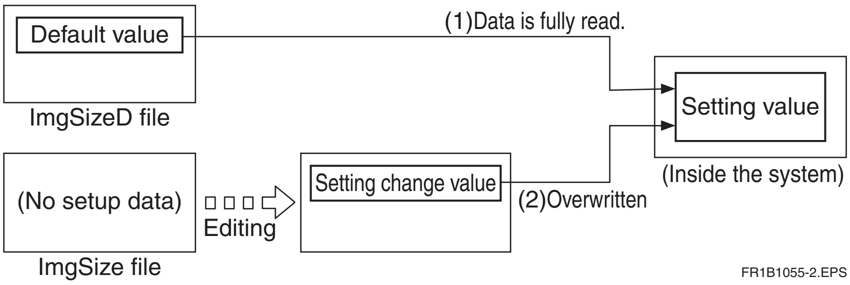
● A05 or later

For software version A05 or later, a value that is for the FN-PS is described as the default in the ImgSizeD file. Nothing is set up in the ImgSize file.

Inside the system, the ImgSizeD file default value is read first, which will then be overwritten by the setting change value if it has been set up in the ImgSize file (the ImgSize file setup data prevails).

To change the default value, describe the setting change value in the ImgSize file depending on the type of the printer to be used.


Default value
(1)Data is fully read.
ImgSizeD file
Setting value
(Inside the system)
(No setup data)
Editing
Setting change value
(2)Overwritten
ImgSize file

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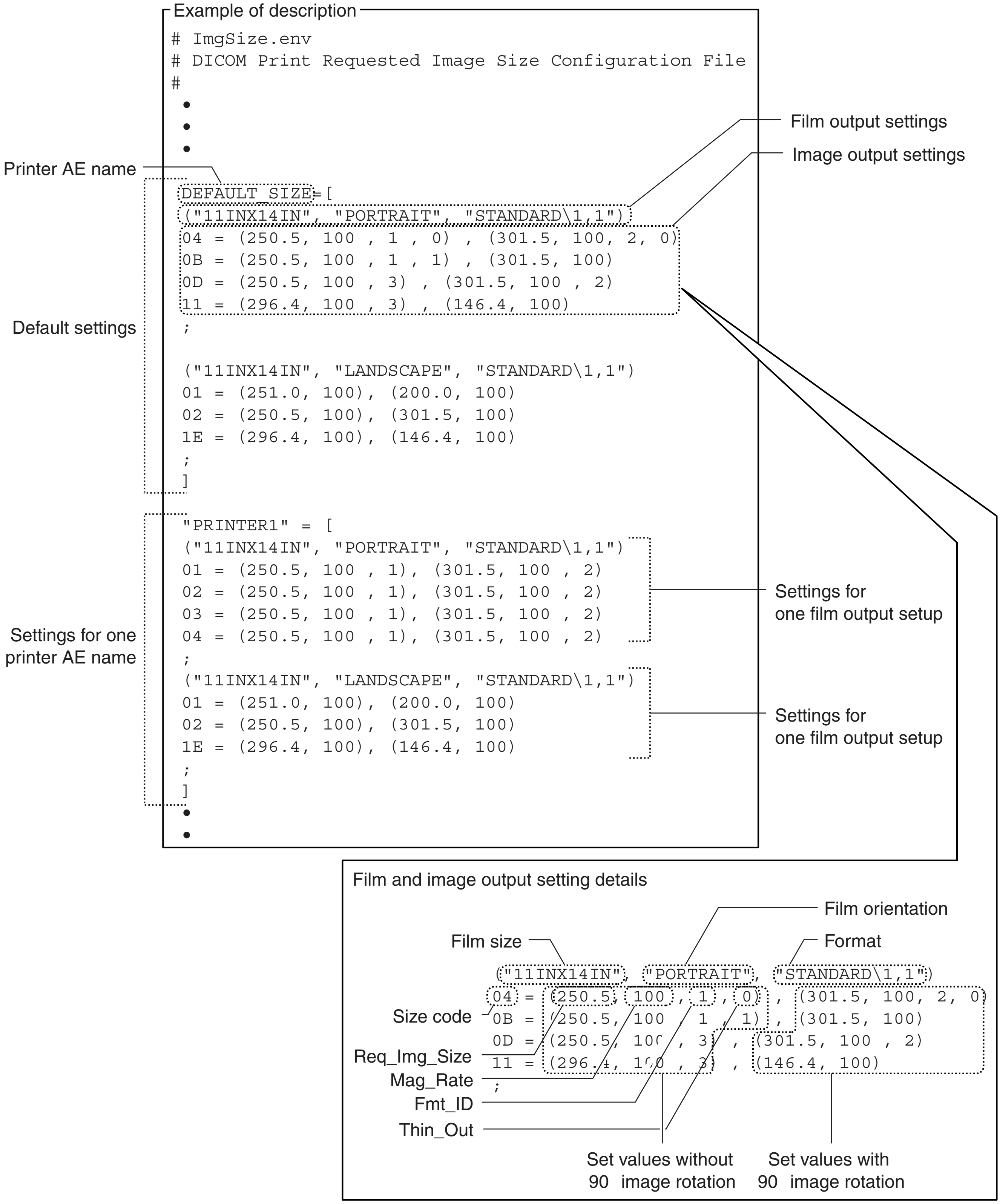
9.3.1 ImgSize File Description Format

Following is the ImgSize file description format.

● Example of ImgSize file description



Example of description

```
# ImgSize.env
# DICOM Print Requested Image Size Configuration File
#
 •
 •
 •
 DEFAULT SIZE=[
 ("11INX14IN", "PORTRAIT", "STANDARD\1,1")
 04 = (250.5, 100 , 1 , 0) , (301.5, 100, 2, 0)
 0B = (250.5, 100 , 1 , 1) , (301.5, 100)
 0D = (250.5, 100 , 3) , (301.5, 100 , 2)
 11 = (296.4, 100 , 3) , (146.4, 100)
 ;

 ("11INX14IN", "LANDSCAPE", "STANDARD\1,1")
 01 = (251.0, 100), (200.0, 100)
 02 = (250.5, 100), (301.5, 100)
 1E = (296.4, 100), (146.4, 100)
 ;
 ]
 "PRINTER1" = [
 ("11INX14IN", "PORTRAIT", "STANDARD\1,1")
 01 = (250.5, 100 , 1), (301.5, 100 , 2)
 02 = (250.5, 100 , 1), (301.5, 100 , 2)
 03 = (250.5, 100 , 1), (301.5, 100 , 2)
 04 = (250.5, 100 , 1), (301.5, 100 , 2)
 ;
 ("11INX14IN", "LANDSCAPE", "STANDARD\1,1")
 01 = (251.0, 100), (200.0, 100)
 02 = (250.5, 100), (301.5, 100)
 1E = (296.4, 100), (146.4, 100)
 ;
 ]
 •
 •
```

Film and image output setting details

```
("11INX14IN", "PORTRAIT", "STANDARD\1,1")
04 = (250.5, 100 , 1 , 0) , (301.5, 100, 2, 0)
0B = (250.5, 100 , 1 , 1) , (301.5, 100)
0D = (250.5, 100 , 3) , (301.5, 100 , 2)
11 = (296.4, 100 , 3) , (146.4, 100)
;
```

Printer AE name
Film output settings
Image output settings
Default settings
Settings for one printer AE name
Settings for one film output setup
Settings for one film output setup
Film orientation
Film size
Format
Size code
Req_Img_Size
Mag_Rate
Fmt_ID
Thin_Out
Set values without 90 image rotation
Set values with 90 image rotation

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Details on each setting follow.

❍ Printer AE name

AE name of the printer.

If "Printer AE name" is set to "DEFAULT_SIZE", it will be a default and will be applied to all printers to which no AE names have been set.

❍ Film output settings

• Film size:	The size of the film to be output.
• Film orientation:	Vertical and horizontal directions of the film to be output.
• Format:	The format of the film to be output.

❍ Image output settings

- Size code
  A 2-character, hexadecimal codes (01 to 1F, excluding 10) that indicates the image size, as determined by the FCR system.
- Availability of set value for 90° image rotation
  Sets a value for just one size code, with or without 90° image rotation.
  When images are output, the respective values will be applied, depending on whether the image is rotated 90° or not.
  The following items can be set.

Req_Img_Size:	Image size
Mag_Rate:	Image magnification/reduction rate
Fmt_ID:	Format number of film annotation characters
Thin_Out:	Number of pixels reduced or not.

First describe items with 90° rotation and then items without. Use parentheses and commas, as shown below.
(Req_Img_Size,Mag_Rate,Fmt_ID, Thin-Out)

■ Cautions in editing the ImgSize file

Observe the following cautions when editing the ImgSize file.

- Description of "Set values with 90° image rotation" and "Set values without 90° image rotation" can be omitted as appropriate. Note, however, that the comma (",") cannot be omitted even if the latter setting (without image rotation) is omitted.
  Examples)
  When "Set values with 90° image rotation (301.5,100.2)" is omitted from 03=(250.5,100.1),(301.5,100.2):
  03=(250.5,100.1)
  When "Set values without 90° image rotation (250.5,100.1)" is omitted from 03=(250.5,100.1),(301.5,100.2):
  03=,(301.5,100.2)
- When no film size information has been set, the ImgSize file information settings will be disregarded and the printer settings accepted.
- Use one line per setting. A changed line will serve as the delimiter code.
- No specific order is required for describing settings.
- Use ":" to delimit each "Setup item for one film output setup."
- "#" at the beginning of a line indicates a comment line.
- Spaces and/or tabs before and after a set value will be disregarded.
- Do not describe a multiple number of the same AE names.
- Do not describe a multiple number of the same format names in the same AE name.
- Do not describe a multiple number of the same size codes in the same format.

◆ NOTE ◆

For a multiple number of the same AE names, format names and size codes described, the first description used to be enabled for version A04 or earlier.
Note, however, that for version A05 or later, a multiple number of such components described will cause an error to occur.

■ ImgSize or ImageSizeD File Default Settings

The tables below show the default settings for the ImgSize.env file (for version A04 or earlier) or the ImageSizeD.env file (for version A05 or later).

● ImgSize.env or ImgSizeD.env file default values (1/6)

Standard image							26×36cm STANDARD\1,1 LANDSCAPE			26×36cm STANDARD\1,1 PORTRAIT			35×43cm STANDARD\1,1 LANDSCAPE			35×43cm STANDARD\1,1 PORTRAIT			26×36cm STANDARD\2,1 LANDSCAPE		
Size code	90° rota-tion	Image size	Size horizontally	Size vertically	Original size (horiz.)	Original size (vert.)	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.
		PC-PS max. recordable area					360			254.1			428.1			352			180		
01	×	8"×10"	2510	2000	2510	2000	251	100	1				251	100	1				175.7	70	1
01	○	8"×10"	2000	2510	2000	2510				200	100	1				200	100	1	171	86	1
02	×	10"×12"	1670	2010	2505	3015				250.5	100	3				250.5	100	3	167	67	1
02	○	10"×12"	2010	1670	3015	2505	301.5	100	4				301.5	100	3				171.8	57	1
03	×	14"×14"	1760	1760	3520	3520				234.4	67	3				234.4	67	3	176	50	1
03	○	14"×14"	1760	1760	3520	3520				234.4	67	3				234.4	67	3	176	50	1
04	×	14"×17"	1760	2140	3520	4280				234.4	67	3				234.4	67	3	176	50	1
04	○	14"×17"	2140	1760	4280	3520	285.2	67	4				285.2	67	3				171.2	40	1
05	×	8"×10" (502)	1710	2140	1995	2496				199.5	100	3				199.5	100	3	171	86	1
05	○	8"×10" (502)	2140	1710	2496	1995	249.6	100	3				249.6	100	3				171.2	69	1
06	×	9.5"×9.5"	1576	1576	2364	2364				236.4	100	3				236.4	100	3	157.6	67	1
06	○	9.5"×9.5"	1576	1576	2364	2364				236.4	100	3				236.4	100	3	157.6	67	1
07	×	8"×10" Portrait	2000	2510	2000	2510				200	100	1				200	100	1	171	86	1
07	○	8"×10" Portrait	2510	2000	2510	2000	251	100	1				251	100	1				175.7	70	1
08	×	43×43cm	2140	2140	4280	4280				249.6	58	3				342.4	80	3	171.2	40	1
08	○	43×43cm	2140	2140	4280	4280				249.6	58	3				342.4	80	3	171.2	40	1
09	×	18×43cm	880	2140	1760	4280				117.2	67	3				117.2	67	3	88	50	1
09	○	18×43cm	2140	880	4280	1760	285.2	67	3				285.2	67	3				171.2	40	1
0A	×	18×24cm	2370	1770	2370	1770	237	100	1				237	100	1				177.7	75	1
0A	○	18×24cm	1770	2370	1770	2370				177	100	1				177	100	1	151.2	86	1
0B	×	24×30cm	1576	1976	2364	2964				236.4	100	3				236.4	100	3	157.6	67	1
0B	○	24×30cm	1976	1576	2964	2364	296.4	100	4				296.4	100	3				177.8	60	1
0C	×	35×35cm	1760	1760	3520	3520				234.4	67	3				234.4	67	3	176	50	1
0C	○	35×35cm	1760	1760	3520	3520				234.4	67	3				234.4	67	3	176	50	1
0D	×	35×43cm	1760	2140	3520	4280				234.4	67	3				234.4	67	3	176	50	1
0D	○	35×43cm	2140	1760	4280	3520	285.2	67	4				285.2	67	3				171.2	40	1
0E	×	15×30cm	1976	976	2964	1464	296.4	100	3				296.4	100	3				177.8	60	1
0E	○	15×30cm	976	1976	1464	2964				146.4	100	3				146.4	100	3	97.6	67	1
0F	×	24×24cm	1576	1576	2364	2364				236.4	100	3				236.4	100	3	157.6	67	1
0F	○	24×24cm	1576	1576	2364	2364				236.4	100	3				236.4	100	3	157.6	67	1

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● ImgSize.env or ImgSizeD.env file default values (2/6)

Standard image							26×36cm STANDARD\1,2 LANDSCAPE 1,2			26×36cm STANDARD\1,2 PORTLAIT			26×36cm STANDARD\2,1 PORTRAIT			35×43cm STANDARD\2,1 LANDSCAPE			35×43cm STANDARD\1,2 LANDSCAPE		
Size code	90° rota- tion	Image size	Size horizontally	Size vertically	Original size (horiz.)	Original size (vert.)	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.
		PC-PS max. recordable area					360			254.1			1270			214			428		
01	×	8"×10"	2510	2000	2510	2000				214.2	86	2				200.8	80	1			
01	○	8"×10"	2000	2510	2000	2510										200	100	1			
02	×	10"×12"	1670	2010	2505	3015										167	67	1			
02	○	10"×12"	2010	1670	3015	2505					67	2				201	67	1			
03	×	14"×14"	1760	1760	3520	3520					50	2				176	50	1			
03	○	14"×14"	1760	1760	3520	3520					50	2				176	50	1			
04	×	14"×17"	1760	2140	3520	4280										176	50	1			
04	○	14"×17"	2140	1760	4280	3520					50	2				214	50	1			
05	×	8"×10" (502)	1710	2140	1995	2496										171	86	1			
05	○	8"×10" (502)	2140	1710	2496	1995					86	2				214	86	1			
06	×	9.5"×9.5"	1576	1576	2364	2364				157.6	67	1				157.6	67	1			
06	○	9.5"×9.5"	1576	1576	2364	2364				157.6	67	1				157.6	67	1			
07	×	8"×10" Portrait	2000	2510	2000	2510										200	100	1			
07	○	8"×10" Portrait	2510	2000	2510	2000				214.2	86	2				200.8	80	1			
08	×	43×43cm	2140	2140	4280	4280				171.2	40	2				171.2	40	1			
08	○	43×43cm	2140	2140	4280	4280				171.2	40	2				171.2	40	1			
09	×	18×43cm	880	2140	1760	4280							1172	67	7	88	50	1			
09	○	18×43cm	2140	880	4280	1760	214	50	1		50	1				214.0	50	1	214	50	1
0A	×	18×24cm	2370	1770	2370	1770				202.8	86	1				202.8	86	1			
0A	○	18×24cm	1770	2370	1770	2370										177	100	1			
0B	×	24×30cm	1576	1976	2364	2964										157.6	67	1			
0B	○	24×30cm	1976	1576	2964	2364				197.6	67	1				197.6	67	1			
0C	×	35×35cm	1760	1760	3520	3520					50	2				176	50	1			
0C	○	35×35cm	1760	1760	3520	3520					50	2				176	50	1			
0D	×	35×43cm	1760	2140	3520	4280										176	50	1			
0D	○	35×43cm	2140	1760	4280	3520					50	2				214	50	1			
0E	×	15×30cm	1976	976	2964	1464				197.6	67	1				197.6	67	1			
0E	○	15×30cm	976	1976	1464	2964										97.6	67	1			
0F	×	24×24cm	1576	1576	2364	2364				157.6	67	1				157.6	67	1			
0F	○	24×24cm	1576	1576	2364	2364				157.6	67	1				157.6	67	1			

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● ImgSize.env or ImgSizeD.env file default values (3/6)

Standard image							**35×43cm STANDARD\1,2 PORTRAIT**			**35×43cm 2-image PORTRAIT 2,1**			**35×43cm STANDARD\2,2 LANDSCAPE**			**35×43cm STANDARD2,2 PORTRAIT**		
Size code	90° rota-tion	Image size	Size horizontally	Size vertically	Original size (horiz.)	Original size (vert.)	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.
		PC-PS max. recordable area					352			176			214			176		
01	×	8"×10"	2510	2000	2510	2000	251	100	2				200.8	80	2	175.7	70	5
01	○	8"×10"	2000	2510	2000	2510										160	80	2
02	×	10"×12"	1670	2010	2505	3015										167	67	2
02	○	10"×12"	2010	1670	3015	2505	201	67	1				201	67	2	171.8	57	1
03	×	14"×14"	1760	1760	3520	3520	176	50	1				176	50	2	176	50	1
03	○	14"×14"	1760	1760	3520	3520	176	50	1				176	50	2	176	50	1
04	×	14"×17"	1760	2140	3520	4280										176	50	2
04	○	14"×17"	2140	1760	4280	3520	214	50	1				214	50	2	171.2	40	1
05	×	8"×10" (502)	1710	2140	1995	2496										171	86	2
05	○	8"×10" (502)	2140	1710	2496	1995	214	86	1				214	86	2	171.2	69	1
06	×	9.5"×9.5"	1576	1576	2364	2364	157.6	67	1				157.6	67	2	157.6	67	2
06	○	9.5"×9.5"	1576	1576	2364	2364	157.6	67	1				157.6	67	2	157.6	67	2
07	×	8"×10" Portrait	2000	2510	2000	2510										160	80	2
07	○	8"×10" Portrait	2510	2000	2510	2000	251	100	2				200.8	80	2	175.7	70	5
08	×	43×43cm	2140	2140	4280	4280	171.2	40	1				171.2	40	2	171.2	40	1
08	○	43×43cm	2140	2140	4280	4280	171.2	40	1				171.2	40	2	171.2	40	1
09	×	18×43cm	880	2140	1760	4280				88	50	1				88	50	2
09	○	18×43cm	2140	880	4280	1760	214	50	1				214	50	1	171.2	40	1
0A	×	18×24cm	2370	1770	2370	1770	237	100	1				202.8	86	1	175.3	74	1
0A	○	18×24cm	1770	2370	1770	2370										151.2	86	2
0B	×	24×30cm	1576	1976	2364	2964										157.6	67	2
0B	○	24×30cm	1976	1576	2964	2364	197.6	67	1				197.6	67	2	174.8	59	1
0C	×	35×35cm	1760	1760	3520	3520	176	50	1				176	50	2	176	50	1
0C	○	35×35cm	1760	1760	3520	3520	176	50	1				176	50	2	176	50	1
0D	×	35×43cm	1760	2140	3520	4280										176	50	2
0D	○	35×43cm	2140	1760	4280	3520	214	50	1				214	50	2	171.2	40	1
0E	×	15×30cm	1976	976	2964	1464	197.6	67	1				197.6	67	1	174.8	59	1
0E	○	15×30cm	976	1976	1464	2964										97.6	67	2
0F	×	24×24cm	1576	1576	2364	2364	157.6	67	1				157.6	67	2	157.6	67	1
0F	○	24×24cm	1576	1576	2364	2364	157.6	67	1				157.6	67	2	157.6	67	1

TR1B1020.EPS

● ImgSize.env or ImgSizeD.env file default values (4/6)

High-quality image							26×36cm STANDARD\1,1 LANDSCAPE			26×36cm STANDARD\1,1 PORTRAIT			35×43cm STANDARD\1,1 LANDSCAPE			35×43cm STANDARD\1,1 PORTRAIT			26×36cm STANDARD\2,1 LANDSCAPE		
Size code	90° rotation	Image size	Size horizontally	Size vertically	Original size (horiz.)	Original size (vert.)	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.
		PC-PS max. recordable area					360			254.1			428.1			352			180		
11	×	8"×10"	2510	2000	2510	2000	251	100	1				251	100	1				175.7	70	1
11	○	8"×10"	2000	2510	2000	2510				200	100	1				200	100	1	171	86	1
12	×	10"×12"	2505	3015	2505	3015				250.5	100	1				250.5	100	1	167	67	5
12	○	10"×12"	3015	2505	3015	2505	301.5	100	2				301.5	100	1				171.8	57	5
13	×	14"×14"	3520	3520	3520	3520				234.4	67	5				352	100	1	176	50	5
13	○	14"×14"	3520	3520	3520	3520				234.4	67	5				352	100	1	176	50	5
14	×	14"×17"	3520	4280	3520	4280				234.4	67	5				352	100	2	176	50	5
14	○	14"×17"	4280	3520	4280	3520	285.2	67	6				428	100	2				171.2	40	5
16	×	9.5"×9.5"	2364	2364	2364	2364				236.4	100	1				236.4	100	1	157.6	67	5
16	○	9.5"×9.5"	2364	2364	2364	2364				236.4	100	1				236.4	100	1	157.6	67	5
17	×	8"×10" Portrait	2000	2510	2000	2510				200	100	1				200	100	1	171	86	1
17	○	8"×10" Portrait	2510	2000	2510	2000	251	100	1				251	100	1				175.7	70	1
18	×	43×43cm	4280	4280	4280	4280				249.6	58	5				342.4	80	1	171.2	40	5
18	○	43×43cm	4280	4280	4280	4280				249.6	58	5				342.4	80	1	171.2	40	5
19	×	18×43cm	1760	4280	1760	4280				117.2	67	5				176	100	2	88	50	5
19	○	18×43cm	4280	1760	4280	1760	285.2	67	5				428	100	1				171.2	40	5
1A	×	18×24cm	2370	1770	2370	1770	237	100	1				237	100	1				177.7	75	1
1A	○	18×24cm	1770	2370	1770	2370				177	100	1				177	100	1	151.2	86	1
1B	×	24×30cm	2364	2964	2364	2964				236.4	100	1				236.4	100	1	157.6	67	5
1B	○	24×30cm	2964	2364	2964	2364	296.4	100	2				296.4	100	1				177.8	60	5
1C	×	35×35cm	3520	3520	3520	3520				234.4	67	5				352	100	1	176	50	5
1C	○	35×35cm	3520	3520	3520	3520				234.4	67	5				352	100	1	176	50	5
1D	×	35×43cm	3520	4280	3520	4280				234.4	67	5				352	100	2	176	50	5
1D	○	35×43cm	4280	3520	4280	3520	285.2	67	6				428	100	2				171.2	40	5
1E	×	15×30cm	2964	1464	2964	1464	296.4	100	1				296.4	100	1				177.8	60	5
1E	○	15×30cm	1464	2964	1464	2964				146.4	100	1				146.4	100	1	97.6	67	5
1F	×	9.5"×9.5"	2364	2364	2364	2364				236.4	100	1				236.4	100	1	157.6	67	5
1F	○	9.5"×9.5"	2364	2364	2364	2364				236.4	100	1				236.4	100	1	157.6	67	5

TR1B1021.EPS

● ImgSize.env or ImgSizeD.env file default values (5/6)

High-quality image							**26×36cm STANDARD\1,2 LANDSCAPE 1,2**			**26×36cm STANDARD\1,2 PORTLAIT**			**26×36cm STANDARD\2,1 PORTRAIT**			**35×43cm STANDARD\2,1 LANDSCAPE**			**35×43cm STANDARD\1,2 LANDSCAPE**		
Size code	90° rotation	Image size	Size horizontally	Size vertically	Original size (horiz.)	Original size (vert.)	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.
		PC-PS max. recordable area					360			254.1			127			214			428		
11	×	8"×10"	2510	2000	2510	2000				214.2	86	2				200.8	80	1			
11	○	8"×10"	2000	2510	2000	2510										200	100	1			
12	×	10"×12"	2505	3015	2505	3015										187.8	75	1			
12	○	10"×12"	3015	2505	3015	2505				201	67	6				201	67	5			
13	×	14"×14"	3520	3520	3520	3520				176	50	6				200.8	57	5			
13	○	14"×14"	3520	3520	3520	3520				176	50	6				200.8	57	5			
14	×	14"×17"	3520	4280	3520	4280										200.8	57	5			
14	○	14"×17"	4280	3520	4280	3520				214	50	6				214	50	5			
16	×	9.5"×9.5"	2364	2364	2364	2364				157.6	67	6				202.2	86	1			
16	○	9.5"×9.5"	2364	2364	2364	2364				157.6	67	6				202.2	86	1			
17	×	8"×10" Portrait	2000	2510	2000	2510										200	100	1			
17	○	8"×10" Portrait	2510	2000	2510	2000				214.2	86	2				200.8	80	1			
18	×	43×43cm	4280	4280	4280	4280				171.2	40	6				171.2	40	5			
18	○	43×43cm	4280	4280	4280	4280				171.2	40	6				171.2	40	5			
19	×	18×43cm	1760	4280	1760	4280							117.2	67	8	117.2	67	5			
19	○	18×43cm	4280	1760	4280	1760	214	50	5	214	50	5				214	50	5	428	100	2
1A	×	18×24cm	2370	1770	2370	1770				202.8	86	1				202.8	86	1			
1A	○	18×24cm	1770	2370	1770	2370										177	100	1			
1B	×	24×30cm	2364	2964	2364	2964										202.2	86	1			
1B	○	24×30cm	2964	2364	2964	2364				197.6	67	6				197.6	67	5			
1C	×	35×35cm	3520	3520	3520	3520				176	50	6				200.8	57	5			
1C	○	35×35cm	3520	3520	3520	3520				176	50	6				200.8	57	5			
1D	×	35×43cm	3520	4280	3520	4280										200.8	57	5			
1D	○	35×43cm	4280	3520	4280	3520				214	50	6				214	50	5			
1E	×	15×30cm	2964	1464	2964	1464				197.6	67	5				197.6	67	5			
1E	○	15×30cm	1464	2964	1464	2964										146.7	100	1			
1F	×	9.5"×9.5"	2364	2364	2364	2364				157.6	67	6				202.2	86	1			
1F	○	9.5"×9.5"	2364	2364	2364	2364				157.6	67	6				202.2	86	1			

TR1B1022.EPS

● ImgSize.env or ImgSizeD.env file default values (6/6)

High-quality image							35×43cm STANDARD\1,2 PORTRAIT			35×43cm 2-image PORTRAIT 2,1			35×43cm STANDARD\2,2 LANDSCAPE			35×43cm STANDARD2,2 PORTRAIT		
Size code	90° rota-tion	Image size	Size horizontally	Size vertically	Original size (horiz.)	Original size (vert.)	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.	Image size vertically (mm)	Mag. rate (%)	Format no.
		PC-PS max. recordable area					352			1760			214			176		
11	×	8"×10"	2510	2000	2510	2000	251	100	2				200.8	80	2	175.7	70	5
11	○	8"×10"	2000	2510	2000	2510										160	80	2
12	×	10"×12"	2505	3015	2505	3015										167	67	6
12	○	10"×12"	3015	2505	3015	2505	225.9	75	1				201	67	6	171.8	57	5
13	×	14"×14"	3520	3520	3520	3520	200.8	57	6				176	50	6	176	50	5
13	○	14"×14"	3520	3520	3520	3520	200.8	57	6				176	50	6	176	50	5
14	×	14"×17"	3520	4280	3520	4280										176	50	6
14	○	14"×17"	4280	3520	4280	3520	244.4	57	6				214	50	6	171.2	40	5
16	×	9.5"×9.5"	2364	2364	2364	2364	202.2	86	2				157.6	67	6	157.6	67	5
16	○	9.5"×9.5"	2364	2364	2364	2364	202.2	86	2				157.6	67	6	157.6	67	5
17	×	8"×10" Portrait	2000	2510	2000	2510										160	80	2
17	○	8"×10" Portrait	2510	2000	2510	2000	251	100	2				200.8	80	2	175.7	70	5
18	×	43×43cm	4280	4280	4280	4280	171.2	40	5				171.2	40	6	171.2	40	5
18	○	43×43cm	4280	4280	4280	4280	171.2	40	5				171.2	40	6	171.2	40	5
19	×	18×43cm	1760	4280	1760	4280				1760	100	2				88	50	6
19	○	18×43cm	4280	1760	4280	1760	244.4	57	5				214	50	5	171.2	40	5
1A	×	18×24cm	2370	1770	2370	1770	237	100	1				202.8	86	1	175.3	74	1
1A	○	18×24cm	1770	2370	1770	2370										151.2	86	2
1B	×	24×30cm	2364	2964	2364	2964										157.6	67	6
1B	○	24×30cm	2964	2364	2964	2364	253.8	86	2				197.6	67	6	174.8	59	5
1C	×	35×35cm	3520	3520	3520	3520	202.2	86	2				176	50	6	176	50	5
1C	○	35×35cm	3520	3520	3520	3520	202.2	86	2				176	50	6	176	50	5
1D	×	35×43cm	3520	4280	3520	4280										176	50	6
1D	○	35×43cm	4280	3520	4280	3520	244.4	57	6				214	50	6	171.2	40	5
1E	×	15×30cm	2964	1464	2964	1464	296.4	100	1				197.6	67	5	168.9	57	5
1E	○	15×30cm	1464	2964	1464	2964										97.6	67	6
1F	×	9.5"×9.5"	2364	2364	2364	2364	202.2	86	2				157.6	67	6	174.8	59	5
1F	○	9.5"×9.5"	2364	2364	2364	2364	202.2	86	2				157.6	67	6	174.8	59	5

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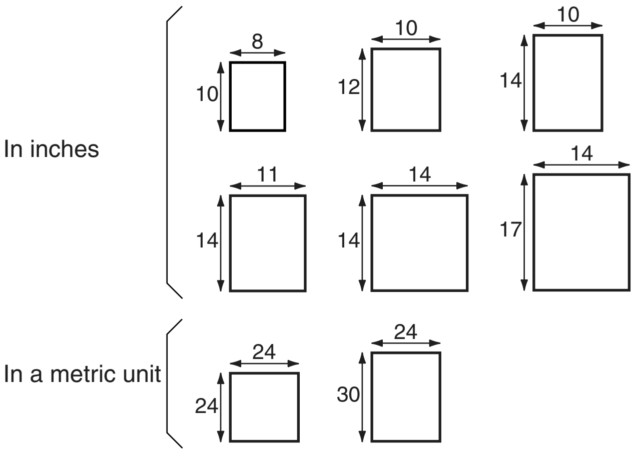
9.3.2 Changing the ImgSize File

■ Changing the film size

To change the size of the film to be output, change the "Film size" settings.

Film size	Setup items
8"×10"	"8INX10IN"
10"×12"	"10INX12IN"
10"×14"	"10INX14IN"
11"×14"	"11INX14IN" (26×36cm)
14"×14"	"14INX14IN"
14"×17"	"14INX17IN" (35×43cm)
24×24cm	"24CMX24CM"
24×30cm	"24CMX30CM"


In inches
8
10
10
12
10
14
11
14
14
14
14
17
In a metric unit
24
24
24
30

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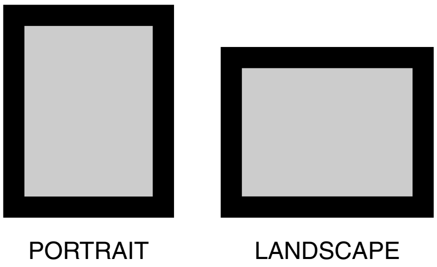
■ Changing the film orientation

To change the orientation of the film to be output, change the "Film orientation" settings.

Film orientation	Setting
Vertical	"PORTRAIT"
Horizontal	"LANDSCAPE"



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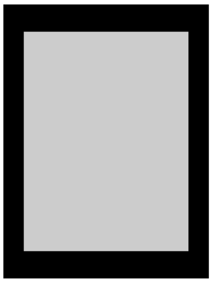
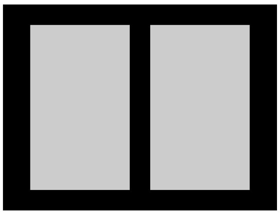
■ Changing the film format

To change the format of the film to be output, change the "Format" settings.

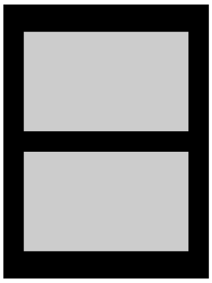
Film format	Setting
One image on one film	"STANDARD\1,1"
Two images placed horizontally on one film	"STANDARD\1,2"
Two images placed vertically on one film	"STANDARD\2,1"
Four images on one film	"STANDARD\2,2"



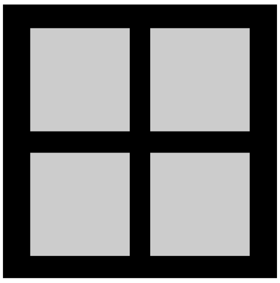
STANDARD\1,1



STANDARD\1,2



STANDARD\2,1



STANDARD\2,2

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■ Changing the image size code

To change the image size code, change the "Size code" settings.

Shown below is the table of size codes that the QA-WS DICOMPrint Function supports.

Code	Name	Pixels	Lines
00	[ ]	0000	0000
01	[i10×8]	2510	2000
02	[i10×12]	1670	2010
03	[i14×14]	1760	1760
04	[i14×17]	1760	2140
05	[i8×10]	1710	2140
06	[i9.5**]	1576	1576
07	[i8×10]	2000	2510
08	[ ]		
09	[ ]		
0a	[m24×18]	2370	1770
0b	[m24×30]	1576	1976
0c	[m35×35]	1760	1760
0d	[m35×43]	1760	2140
0e	[m30×15]	1976	976
0f	[m24×24]	1576	1576
10	[ ]	0000	0000
11	[i10×8]	2510	2000
12	[i10×12]	1670	2010
13	[i14×14]	1760	1760
14	[i14×17]	1760	2140
15	[ ]		
16	[i9.5**]	1576	1576
17	[i8×10]	2000	2510
18	[ ]		
19	[ ]		
1a	[m24×18]	2370	1770
1b	[m24×30]	1576	1976
1c	[m35×35]	1760	1760
1d	[m35×43]	1760	2140
1e	[m30×15]	1976	976
1f	[m24×24]	1576	1576

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■ Changing the image size

To change the image size, change "Req_Img_Size" for each size code of the image you wish to change.
Confirm whether or not to rotate 90° the image you wish to change the size of and then change "Req_Img_Size" for "Set values with 90° rotation" or "Set values without 90° rotation."
Image size can be set in a range from 0.1 to 999.9 (unit: mm).

You can omit "Req_Img_Size." If you do, also omit "Mag_Rate." Omitting these items will make the printer settings effective.
Following is an example of description when both "Req_Img_Size" and "Mag_Rate" have been omitted.

Example)
When both "Set values without 90° rotation" and "Set values with 90° rotation" have been omitted:

```
04=(,,1),(,,3)
```

■ Changing the image magnification/reduction rate

To change image magnification/reduction rate, change "Mag_Rate" for each size code of the image you want to change.
Confirm whether or not to rotate 90° the image you want to change the magnification/reduction rate for and then change "Mag_Rate" for "Set values with 90° rotation" or "Set values without 90° rotation".
Make sure to set "Mag_Rate" using a percentage related to the actual size of the image.
Image magnification/reduction can be set as an integer from 1 to 999.

You can omit "Mag_Rate." If you do, omit "Req_Img_Size" together with it. Omitting these items will make the printer settings effective.
Following is an example of description when both "Req_Img_Size" and "Mag_Rate" have been omitted.

Example)
When only "Set values without 90° rotation" has been omitted:

```
08=(,,2),(200.0,100,1)
```

■ Changing the character format

To change the character format, change "Fmt_ID" for each size code of the image you wish to change.

Confirm whether or not to rotate 90° the image you want to change the character format for and then change "Fmt_ID" for "Set values without 90° rotation" or "Set values with 90° rotation".

For "Fmt_ID," specify the format number.

Format name	Format no.	Area size	Remarks	
FMT1	1	1600×200	Image magnified/reduced	100 to 70%
FMT2	2	500×400		100 to 70%
FMT3	3	1600×200		100% or more
FMT4	4	500×400		100% or more
FMT5	5	2400×350		70% or less
FMT6	6	1000×900		100% or less
FMT7	7	880×400	1843 standard 2-image format	
FMT8	8	1760×800		

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"Fmt_ID" can be omitted. If it is, film annotation character format "FMT1" will be considered selected. Following is an example of description when "Fmt_ID" is omitted.

Example)
When "Fmt_ID" has been omitted only for "Set values without 90° rotation":
1E = (175.0, 50), (150,50,4)

☞ "9.4 Setting the FilmStrFmt File".

■ Changing whether or not to reduce the number of pixels

To change whether or not to reduce the number of pixels, specify or cancel "Thin_Out" for the size code of the image you wish to change.

This setting is available only for the setting used for printout of HQ images using the FieldTool function. When specified not to print, images are always subjected to reduction of the number of pixels regardless of whether "Thin_Out" is specified or not.
For standard images, note that no images will be subjected to reduction of the number of pixels, regardless of what is specified using the FieldTool function or even if "Thin_Out" is specified.

The number of pixels is reduced to make the amount of image data smaller so that it is printed normally to a printer (FN-PS, FM-DP L or DRYPIX) to which the limitation of memory capacity applies.
This processing is performed when transferring an image that exceeds the memory capacity.

◆ *NOTE* ◆

The following memory limitations are applied to the printers.
- *FN-PS : Dependent on the PC memory.*
- *FM-DP R : 90MB*
- *DRYPIX : 90MB*

Check whether or not to rotate 90° an image on which if reduction of the number of pixels is specified or not, and then change "Thin_Out" of "Whether or not to specify 90° rotation".

Specify "0" (the number of pixels is not reduced") or "1" (the number of pixels is reduced).
Whether or not to apply reduction processing on an image is decided depending on the image type, HQ image output specified or not using the FieldTool function, or "Thin_Out" specified or not.

Image type	HQ image output specified or not with FieldTool	"Thin_Out" specified or not	Pixels reduced or not
Standard images	ON (output)	1 (reduce)	Not to reduce.
		0 (not to reduce)	
	OFF (not to output)	1 (reduce)	
		0 (not to reduce)	
HQ images	ON (output)	1 (reduce)	Reduce.
		0 (not to reduce)	Not to reduce.
	OFF (not to output)	1 (reduce)	Reduce.
		0 (not to reduce)	

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Note that "Thin_Out" can be omitted. If it is omitted, the processing will be handled as "the number of pixels to be reduced".

Example) For an 14"×17" HQ image printout specified with no reduction of the number of pixels.
14 = (234.4,67,5.0)

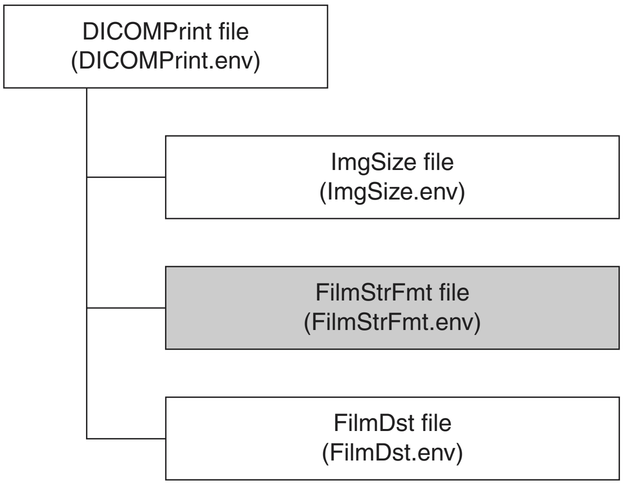
For an 14"×17" HQ image printout specified for reduction of the number of pixels.
14 = (234.4,67,5.1)
or
14 = (234.4,67,5)
└Can be omitted.

9.4 Setting the FilmStrFmt File

The FilmStrFmt file (FilmStrFmt.env) must be set only when the film annotation character format number has been specified for the ImgSize file (when a value has been specified for "Fmt_ID").

For the FilmStrFmt file, the image data contains the set format for the character string (film annotation characters) to be printed.

This file is stored in the same directory ("C:\Program Files\Hi-cx") as the QA-WS operation file.


DICOMPrint file
(DICOMPrint.env)
ImgSize file
(ImgSize.env)
FilmStrFmt file
(FilmStrFmt.env)
FilmDst file
(FilmDst.env)

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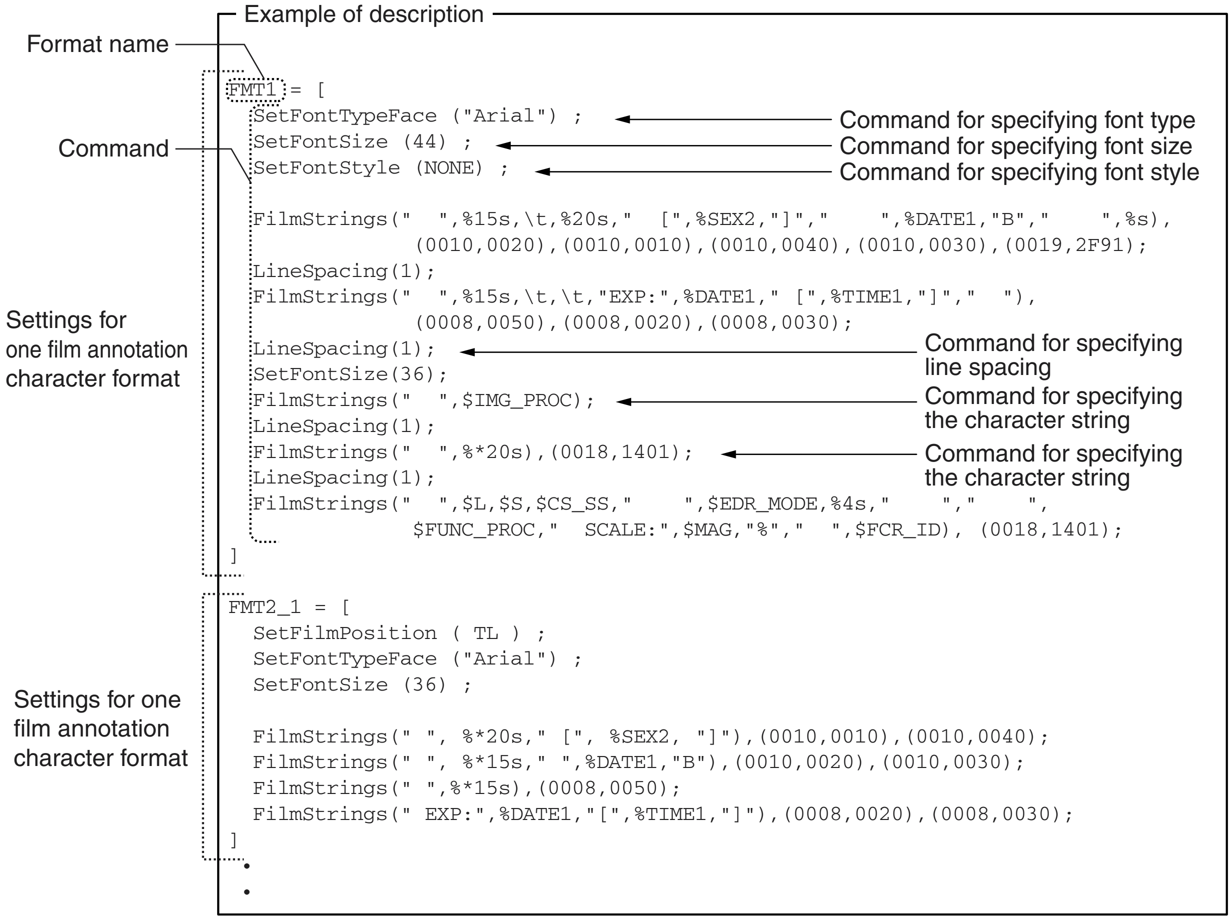
After the optional Print Service software has been installed, the FilmStrFmt file will have the set values for FMT1 to FMT8 described as the defaults.
Make sure to change this file as requested by the user. If it is not changed, the defaults will remain in effect.

9.4.1 FilmStrFmt File Description Format

Following is the FilmStrFmt file description format.



```
FMT1 = [
  SetFontTypeFace ("Arial") ;
  SetFontSize (44) ;
  SetFontStyle (NONE) ;

  FilmStrings("  ",%15s,\t,%20s,"  [",%SEX2,"]","    ",%DATE1,"B","    ",%s),
               (0010,0020),(0010,0010),(0010,0040),(0010,0030),(0019,2F91);
  LineSpacing(1);
  FilmStrings("  ",%15s,\t,\t,"EXP:",%DATE1," [",%TIME1,"]","  "),
               (0008,0050),(0008,0020),(0008,0030);
  LineSpacing(1);
  SetFontSize(36);
  FilmStrings("  ",$IMG_PROC);
  LineSpacing(1);
  FilmStrings("  ",%*20s),(0018,1401);
  LineSpacing(1);
  FilmStrings("  ",$L,$S,$CS_SS,"    ",$EDR_MODE,%4s,"    ","    ",
               $FUNC_PROC,"  SCALE:",$MAG,"%","  ",$FCR_ID), (0018,1401);
]

FMT2_1 = [
  SetFilmPosition ( TL ) ;
  SetFontTypeFace ("Arial") ;
  SetFontSize (36) ;

  FilmStrings(" ", %*20s," [", %SEX2, "]"),(0010,0010),(0010,0040);
  FilmStrings(" ", %*15s," ",%DATE1,"B"),(0010,0020),(0010,0030);
  FilmStrings(" ",%*15s),(0008,0050);
  FilmStrings(" EXP:",%DATE1,"[",%TIME1,"]"),(0008,0020),(0008,0030);
]
  •
  •
```

Example of description
Format name
Command
Settings for one film annotation character format
Settings for one film annotation character format
Command for specifying font type
Command for specifying font size
Command for specifying font style
Command for specifying line spacing
Command for specifying the character string
Command for specifying the character string

FR1B1045.EPS

Following are the details of each setting.

❍ Format name

Describes the name of the format. In the FilmStrFmt file, a multiple number of formats can be defined by changing the name for each film annotation character display area.
☞ 9.4.5, "Supplementary Information of Film Annotation Character Setup"

❍ Command

Describes the command for setting film annotation character format. Here, command format is similar to a programming language.
These commands relate to fonts and character strings.
☞ 9.4.2, "Changing the Film Annotation Characters"

• Font specifying commands

Font specification	Command
Font type specification	SetFontTypeFace
Font size specification	SetFontSize
Font style specification	SetFontStyle

• Character string specifying commands

Output character string specification	Command
Output position specification	SetFilmPosition
Line spacing specification	LineSpacing
Output format and attribute specification	FilmStrings

■ Cautions in editing the FilmStrFmt file

Following are the cautions to observe when editing the FilmStrFmt file.

- "#" at the top of a line indicates a comment line.
- Unnecessary spaces, tabs and line changes will be disregarded.
- Describe commands by the use of "," between them.

◆ *NOTE* ◆

Because FilmStrFmt is a Unicode-formatted text file, a Unicode-formatted Windows NT Note Pad is necessary for file editing.

9.4.2 Changing the Film Annotation Characters

■ Specifying the font type

Use the "SetFontTypeFace" command to specify the font type.

This command will be effective from the line describing "SetFontTypeFace" is to the line that directly precedes another "SetFontTypeFace" description.

◆ *NOTE* ◆

Because no default values are available for font type, make sure to specify values for each film annotation character format.

● SetFontTypeFace description format

SetFontTypeFace ("font name");

Enclose a True-Type font name in quotation marks ("   ").

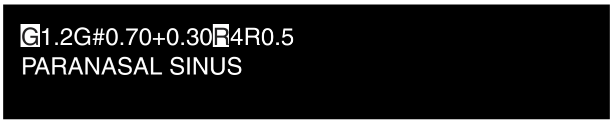
Any of the fonts that are available when Windows NT is installed can be specified.

● SetFontTypeFace description examples

- Specifying MS Gothic
  SetFontTypeFace("MS Gothic")
- Specifying Times New Roman
  SetFontTypeFace("TimesNewRoman")

● SetFontTypeFace printout examples

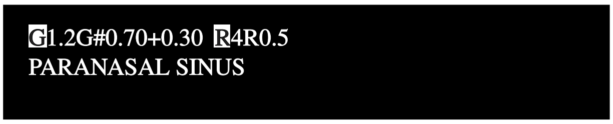
- "MS Gothic" specified



G1.2G#0.70+0.30R4R0.5
PARANASAL SINUS

FR1B1013.EPS

- "TimesNewRoman" specified



G1.2G#0.70+0.30 R4R0.5
PARANASAL SINUS

FR1B1014.EPS

■ Specifying the font size

Use the "SetFontSize" command to specify the font size.
This command will be effective from the line describing "SetFontSize" is to the line that directly precedes another "SetFontSize" description.

◆ *NOTE* ◆

Because no default values are available for font size, make sure to specify values for each film annotation character format.

● SetFontSize description format

SetFontSize (font size);

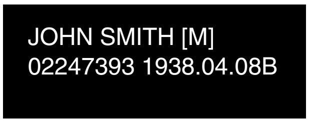
Specify a font size using values expressed in terms of pixels.

● SetFontSize description examples

- Specifying the font size to be 20 pixels
  SetFontSize(20);
- Specifying the font size to be 40 pixels
  SetFontSize(40);

● SetFontSize printout examples

- Font size specified as 20 pixels



JOHN SMITH [M]
02247393 1938.04.08B

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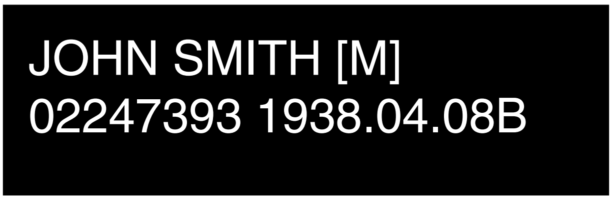
- Font size specified as 40 pixels



JOHN SMITH [M]
02247393 1938.04.08B

FR1B1016.EPS

■ Specifying the font style

Use the "SetFontStyle" command to specify the font style.
This command will be effective from the line describing "SetFontStyle" is to the line that directly precedes another "SetFontStyle" description.

◆ *NOTE* ◆

Because no default values are available for font style, make sure to specify values for each film annotation character format.

● SetFontStyle description format

SetFontStyle (font style);

Select any one of the following.

- Bold : BOLD
- Italic : ITALIC
- Normal: NONE

When selecting the two font styles at the same time, use "|" to delimit them (ex.: BOLD|ITALIC). However, "NONE" can only be selected solely.

◆ *NOTE* ◆

Specifying "ITALIC" for characters displayed in reverse video can make it look like they are missing in parts. "ITALIC" is thus disabled for reverse-video characters.

● SetFontStyle description examples

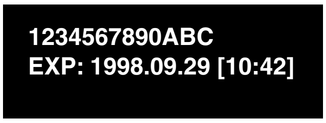
- Bold specified

  SetFontStyle (BOLD);
- Specifying bold and italic at the same time

  SetFontStyle (BOLD|ITALIC) ;

● SetFontStyle printout examples

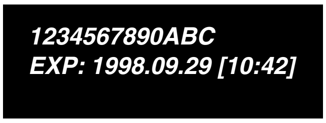
- Bold specified



1234567890ABC
EXP: 1998.09.29 [10:42]

FR1B1017.EPS

- Bold and italic specified



1234567890ABC
EXP: 1998.09.29 [10:42]

FR1B1018.EPS

■ Specifying the film annotation character printing position

Use the "SetFilmPosition" command to specify one of the four corners on the image data as the film annotation character printing position.

When a multiple number of film annotation character formats have been specified for one piece of image data ("FMT1_1" and "FMT1_2", for example) , make sure to specify the printing position for each film annotation character format.

● SetFilmPosition description format

SetFilmPosition (print position);

Select one of the following four.

- Top left corner : TL
- Top right corner : TR
- Bottom left corner : BL
- Bottom right corner : BR

● SetFilmPosition description examples

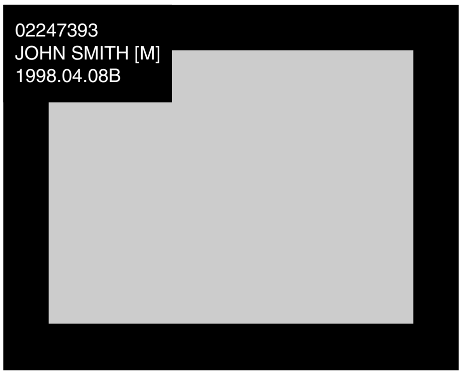
- Top left corner specified

  SetFilmPosition (TL);
- Bottom right corner specified

  SetFilmPosition (BR);

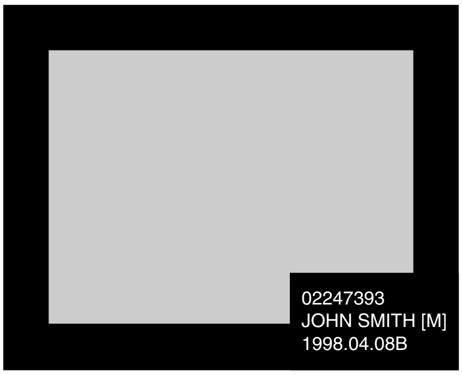
● SetFilmPosition printout examples

- Top left corner specified


02247393
JOHN SMITH [M]
1998.04.08B

FR1B1021.EPS

- Bottom right corner specified


02247393
JOHN SMITH [M]
1998.04.08B

FR1B1022.EPS

■ Specifying the line spacing

Specify line spacing with the "LineSpacing" command.

● LineSpacing description format

LineSpacing (line spacing);

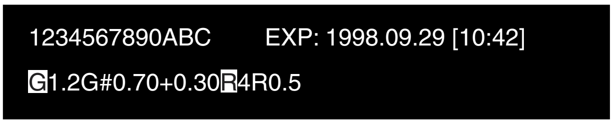
Use an integer between 1 and 400 (in terms of pixels) to specify line spacing for film annotation characters.

● LineSpacing description examples

- Specifying line spacing of 5 pixels
  LineSpacing(5);
- Specifying line spacing of 50 pixels
  LineSpacing(50);

● LineSpacing printout examples

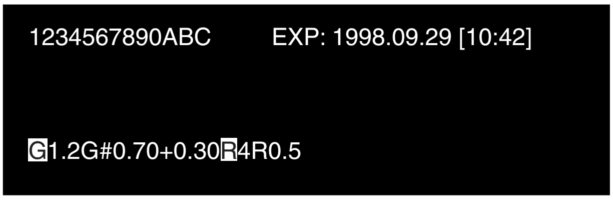
- Line spacing of 5 pixels specified



1234567890ABC EXP: 1998.09.29 [10:42]
G1.2G#0.70+0.30R4R0.5

FR1B1019.EPS

- Line spacing of 50 pixels specified



1234567890ABC EXP: 1998.09.29 [10:42]

G1.2G#0.70+0.30R4R0.5

FR1B1020.EPS

■ Specifying print format and attributes

Use the "FilmStrings" command to specify character strings.

● FilmStrings description format

FilmStrings(format descriptor1, format descriptor2,···),(attribute descriptor1),(attribute descriptor2)···;

- Format descriptor "n"

  Specifies the "format descriptor" that shows the format in which character strings are printed out. A maximum of 512 descriptors can be specified. However, the maximum total length of all character strings represented by the format descriptor is 256 characters.

  ☞ 9.4.3, "Format Descriptor"

- Attribute descriptor "n"

  Specifies the "attribute descriptor" that shows an attribute to be printed out as a character string. Basically, one attribute descriptor is given per format descriptor. The attribute descriptor is a tag number that represents the attribute to be printed out.

  It is not necessary to specify the attribute descriptor when the format descriptor is attribute-specific.

  ☞ 9.4.4, "Attribute Descriptor"

● FilmStrings description examples

- Printing out patient and exposure information

  The patient and exposure information indicated below are printed out.
  - Patient name : Character string of variable length, up to 20 characters
  - Sex : "["+M or F+"]"
  - Patient ID : Character string of variable length, up to 15 characters
  - Date of birth : YYYY.MM.DD + "B"
  - Date of examination : Character string of variable length, up to 15 characters
  - Date of exposure : "EXP" + YYYY.MM.DD
  - Time of exposure :"["+HH:MM+"]"

```
FilmStrings("",%*20s,"[",%SEX2,"]"),(0010,0010),(0010,0040);
FilmStrings("",%*15s,"",%DATE1,"B"),(0010,0020),(0010,0030);
FilmStrings("",%*15s),(0008,0050);
FilmStrings("EXP:",%DATE1,"[",%TIME1,"]"),
    (0008,0020),(0008,0030)
```

- Printing out image processing parameters

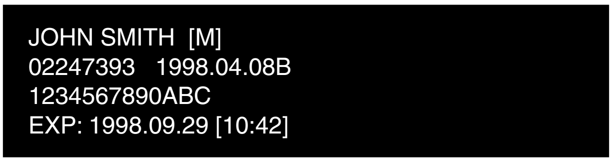
  The following image processing parameters are printed out.

  - Gradation processing parameters : G + GA + GT + "#" + GC + GS
  - Frequency processing parameters : R + RN + RT + RE
  - Latitude (L value) : L + latitude
  - System sensitivity (S value) : S + system sensitivity
  - Corrections (gradation and density) : C + gradation correction + density correction
  - Image magnif./reduc. rate : SCALE:" + percentage

```
FilmStrings(" ",$IMG_PROC);
FilmStrings(" ",$L,$S,$CS_SS," ",SCALE:",$MAG,"%");
```

● FilmStrings printout examples

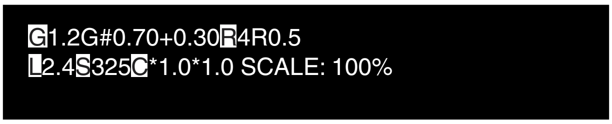
- Patient and exposure information printout



```
JOHN SMITH  [M]
02247393   1998.04.08B
1234567890ABC
EXP: 1998.09.29 [10:42]
```

FR1B1009.EPS

- Image processing parameters printout



```
G1.2G#0.70+0.30R4R0.5
L2.4S325C*1.0*1.0 SCALE: 100%
```

FR1B1010.EPS

9.4.3 Format Descriptor

Described next are the format descriptor types and content presented in 9.4.2, "Changing the Film Annotation Characters ■ Specifying print format and attributes."

Three format descriptor types are available. The first character of each format descriptor identifies the type.

First character	Descriptor type
\	Character string control descriptor
%	Character string style descriptor
$	Attribute-specific format descriptor

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◆ *REFERENCE* ◆

The C language command "printf" format-specified method has been adopted basically for the format descriptor that specifies the character string print format.
However, the "printf" method has been expanded to make the following items available.

- *Special print character formats, including characters in reverse video*
- *Some VR-specific patterns, including date format*
- *Information not assigned tag numbers, such as film image magnification/reduction*
- *Handling of a multiple number of attributes in a group (such as image processing parameters)*

Format descriptors not required by the "printf" method have been deleted.

■ Character string control descriptor (\)

Shown below are format descriptors that control character strings.

Descriptor	Meaning
\t	Inserts tabs. Each tab is equivalent to 80 pixels. The registry will manage tab values.
\r	Displays the characters that follow in reverse video, which will be effective until "\r" is specified again.

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☞ 9.6, "Changing the Registry"

■ Character string style descriptor (%)

This format descriptor indicates that the character string style is composed as follows.

%[flag][width][type]

● [flag]

Shows the information necessary for controlling character string length. Can be omitted. If [flag] has been specified, [width] must also be specified.

Flag description	Meaning
-	Outputs character strings padded from the left. This is effective only when fixed length has been specified using [width]. If it has not, character strings will be output padded from the right.
*	Shows that the character string length specified by [width] consists of a maximum number of characters. If the length of the character string to be output is longer than that specified by [width], it will be output as specified by [width]. If the length of the character string to be output is shorter than that specified by [width], it will be output as it actually is.

TR1B1003.EPS

● [width]

Shows the character string length. When "*" has been specified for [flag], this indicates the maximum character string length. When it has not, it indicates the fixed length.

Only when "f" has been specified for [type] the "a.b" style specification will be effective, where "a" indicates the number of digits (of an integer) and "b" the number of decimal places.
In this case, "a" can be omitted. Omitting "a" will not determine the number of digits while determining only the number of decimal places. When "f" has been specified for [type], it will not be possible to omit only "b." Specifying 0 for "b" will cause an error.

[type]

Shows the type of character string notation. This cannot be omitted. Two types are available: the standard type supported by C language and a special type added exclusively for film annotation characters.

The standard type uses small letters to annotates character strings and the special type uses large alphanumerics. Numbers cannot be used at the beginning of character strings.

The table below shows character strings annotation types.
In the table, attributes other than those listed in the "Attribute VR" column (UN and SQ) cannot be output as film annotation characters.

Standard type

Annotation type	Attribute VR	Note
d	OB,OW,SL,SS,UL, US	Outputs binary data in decimal form. Image data and overlay data cannot be selected.
x	AT,OB,OW,SL,SS, UL,US	Outputs binary data in hexadecimal form. Letters will be output in capitals.
f	FL,FD	Outputs binary data in floating-decimal-point form.
s	AE,AS,CS,DS,DT, IS,LO,LT,PN,SH, ST,UI	Outputs character string data. Character strings of a maximum length of 256 characters can be output.

TR1B1004.EPS

❍ Special type

Annotation type	Attribute VR	Note
DATEn	DA	Outputs various date display patterns in accordance with the values specified by "n." Patterns are as follows. DATE1 : 1998.12.13 DATE2 : 1998.DEC.13 DATE3 : 12.13.1998 DATE4 : DEC.13.1998 DATE5 : 13.12.1998 DATE6 : 13.DEC.1998 DATE7 : H1.01.13 DATE8 : 平1.01.13
TIMEn	TM	Outputs various time display patterns in accordance with the values specified by "n." This setting is valid only for information for which "Attribute VR" has been set to "TM." Patterns are as follows. TIME1 : 10:51 TIME2 : 10:51:20
AGEn	DA (date of birth only)	Outputs various age display patterns in accordance with the values specified by "n." This setting is valid only for information on date of birth. Patterns are as follows. AGE1: 25 years, 1 year and 8 months, 1 month and 10 days, 13 days AGE2: 25Y, 1Y8M, 1M10D, 13D Output format will differ with the relevant age, as follows. 0 years to 0 years and 1 month or under: ** days 0 years and 1 month up to 1 year: ** months 1 to 8 years: ** years and ** months 8 years or over:** years
SEXn	CS (sex only)	Outputs sex display patterns in accordance with the values specified by "n." This setting is valid only for information on sex. Patterns are as follows. SEX1: Male, female, (for others, 1 space) SEX2: M, F, O (for others, 1 space)

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■ Attribute-specific format descriptor ($)

The attribute-specific format descriptor is used for outputting a multiple number of attributes in groups or for outputting information that has not been assigned tag numbers.

The attribute-specific format descriptor requires no attribute descriptors (the tag numbers shown below).

The table below presents attribute-specific format descriptors.

● Table of attribute-specific format descriptors (1/2)

Descriptor	Information displayed	Sample character format	Note
$IMG_PROC	Image processing parameter	Outputs image processing parameters (G,R,O,D,U,H,P). Parameter output will depend on the image processing parameter formats described hereafter.	Processing parameters for any processing that is not subjected to in view of processing path will not be output.
$GAMMA	Gradation processing parameter	G 1.0G#1.6-0.20	–
$BETA	Frequency processing parameter	R 4R0.5	Parameters will not be output during multi-frequency processing (MFP).
$1DUSM	1D-USM processing parameter	O 3V1.0	Parameters will not be output if this process is not performed.
$DRC	DRC processing parameter	D 2A0.8	Parameters will not be output if this process is not performed.
$H_USM	Hyper-USM processing parameter	U FA0.8	Parameters will not be output if this process is not performed.
$H_DRC	Hyper-DRC processing parameter	H FA0.8	Parameters will not be output if this process is not performed.
$PEM	PEM processing parameter	P ABC1.5	Parameters will not be output if this process is not performed.

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● Table of attribute-specific format descriptors (2/2)

Descriptor	Information displayed	Example of character format	Note
$MOD	Image processing parameter change mark	*	Parameters will be output only when they have been changed.
$CS_SS	Term of correction	C *1.0/1.5	For both gradation correction and density correction, parameters are output converted to character strings.
$FCR_ID	FCR image ID	A 001	Can be output by changing the image number.
$AP_PA	Right-and-left reversal mark	R	Can be output only when image is reversed.
$IP_NUM	IP number	0412657	Outputs the number without "a" before it and "c" after it.
$MAG_RATE	Image magnif. rate	67	Can be output only when the image size requested has been set.
$FUNC_PROC	Pair processing information	RT-01 is for image processing type RT. ES 01 02-01 is for an image processing type other than RT.	Image processing type (0019,2F40) Set numbers (0021,2F30) Image numbers in the set (0021,2F40) Pair processing information numbers (0021.2F50)
$ES	Energy subtraction information	T AGGH @	Can be output only when all four energy subtraction parameters are within the range of A to T. Energy subtraction parameters (50F1, 2F06) Result of subtraction registration (50F1, 2F07) Normal : Adds @. Abnormal : Does not add @.
$L	L value	L 2.0	–
$S	S value	S 20000	–

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9.4.4 Attribute Descriptors

Described next are the specific types and contents of the attribute descriptors discussed in 9.4.2, "Changing the Film Annotation Characters ■ Specifying print format and attributes."

The attribute descriptor is information used to specify several kinds of attributes to be printed out as film annotation characters.
One attribute descriptor can be described for each format descriptor. The attribute descriptor represents a tag number for the attribute to be printed out.

■ Attribute descriptor description format

Following is the attribute descriptor description format.

(gggg,eeee)

gggg: Group number. Fixed four digits in hexadecimal form.
eeee: Element number. Fixed four digits in hexadecimal form.

■ Attribute descriptor description cautions

- Parentheses "( )" are required when describing a tag number.
- Use a comma (",") between attributes .
- Use a comma (",") between a group and an element.
- If the specified tag is not available, use one half-size space.
- For the patient's name, create a character string after delimitation conversion.
- When printing out a kanji character string, remove the ESC sequence and then create the string.
- Handle control characters within LT and ST as spaces.
- For a tag for which VM is 1 or more, only the head information will be printed out. However, information for the character string will be printed out including the "\" that represents delimitation.

■ Attributes printed out using the QA-WS

The table below shows the attributes that can be printed out using the QA-WS DICOM Print Function.

● Attributes that can be printed out using the QA-WS and its attribute descriptors (1/4)

	Attribute	Annotation	Film annotation characters	Format descriptor	Attribute descriptor
1	Hospital (institution) name	kanji	富士フイルム病院	%s	(0009, 2F80)
		ANK	FUJI HOSPITAL	%s	(0008, 0080)
2	IP no.	The "a" and "c" are deleted.	04012657	$IP_NUM	(0018, 1004)
3	EDR mode		A, S, F, M	$EDR_MODE	(0019, 2F50)
	Menu code		0900	%s	(0018, 1401)
4	System ID	A to Z	A 001	$FCR_ID	-
	Image no.	Decimal under 3 digits			
5	Image proc. conditions			$IMG_PROC	-
	Gradation proc.	γ-identifying characters GA, GT, GC, GS	G .0G#1.6-0.20	$GAMMA	-
	Frequency proc.	β-identifying characters RN, RT, RE	R 4R0.5	$BETA	-
	1D-USM	1D-USM identification characters ORN, ORD, ORE	O 3V1.0	$1DUSM	-
	DRC	DRC identification characters DRN, DRT, DRE	D 2A0.8	$DRC	-
	MFP-USM	MFP-USM identification characters HRN, HRT, HRE	U FA0.8	$H-USM	-
	MFP-DRC	MFP-DRC identification characters HDN, HDT, HDE	H FA0.8	$H_DRC	-
	PEM proc.	PEM proc. parameter characters PRN, α edge, α calc, PRE	P ABC1.5	$PEM	-
	Image proc. condition change mark		*	$MOD	-

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● Attributes that can be printed out using the QA-WS and its attribute descriptors (2/4)

	Attribute	Annotation	Film annotation characters	Format descriptor	Attribute descriptor
6	Exposure menu name	kanji	胸部概観	%s	(0018, 1400)
		ANK	CHEST GENERAL	%s	(0019, 2F32)
7	Normalization conditions + correction term			-	-
	Latitude	Latitude identification character Latitude	L 2.0	$L	-
	System sensitivity	System sensitivity identification character System sensitivity	S 20000	$S	-
	Correction term	Correction term identification character, gradation correction, density correction	C *1.0/1.5	$CS_SS	-
8	Department name	kanji	放射線科	%s	(0032, 1033)
		ANK	SURGERY1	%s	(0009, 2F92)
9	Radiographer code		NT	%s	(0019, 2F60)
	Exposure stand information		100kv10mAs	%s	(0019, 2F90)
10	Patient ID		1010181139	%s	(0010, 0020)
11	Patient name	kanji	富士太郎	%s	(0011, 2F10)
		ANK	FUJI TARO	%s	(0010, 0010)
12	Examination no.	Accession Number	1234567890ABC	%s	(0008, 0050)

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● Attributes that can be printed out using the QA-WS and its attribute descriptors (3/4)

	Attribute	Annotation	Film annotation characters	Format descriptor	Attribute descriptor
13	Date of exposure		撮影日... EXP: ..	"撮影日:" "EXP:"	-
		ANSI short format	1998.12.13	%DATE1	(0008, 0020)
		ANSI long format	1998.DEC.13	%DATE2	
		American short format	12.13.1998	%DATE3	
		American long format	DEC.13.1998	%DATE4	
		European short format	13.12.1998	%DATE5	
		European long format	13.DEC.1998	%DATE6	
		Japanese date format	H10.12.13	%DATE7	
		Japanese date (kanji) format	平10.12.13	%DATE8	
14	Sex: kanji	kanji	[男] or [女]	%SEX1	(0010, 0040)
	Sex: ANK	Alphabet	[M] or [F]	%SEX2	(0010, 0040)
15	Age	Y, YM, MD, D		-	-
		kanji	25才, 1才8ヶ月, 1ヶ月10日, 13日	%AGE1	(0010, 0030)
		Alphanumerics	25Y, 1Y8M 1M10D, 13D	%AGE2	
	Date of birth	YYYY.MM.DD生	1989.12.13生	%DATEn, "生"	
		YYYY.MM.DDB	1989.12.13B	%DATEn, "B"	

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● Attributes that can be printed out using the QA-WS and its attribute descriptors (4/4)

	Attribute	Annotation	Film annotation characters	Format descriptor	Attribute descriptor
16	Pair proc	Proc. type, pair no., IP and IL	ES01 02-01	$FUNC_PROC	
	Routine proc.	Indicates the routine and serial routine processing nos.	RT-01		
17	Time of exposure	Hour and minute	[10:51]	"[" ,%TIME1, "]"	(0008, 0030)
18	Film mark	Film annotation characters1	P→A	%s	(0019, 2F91)
19	Magnif./reduc. rate		縮率: 100%	"縮率:" SCALE: 100%	-
			SCALE : 100%	"SCALE:", $MAG, "%"	-
20	Patient name (2)	ふりがな	ﾌｼﾞ ﾀﾛｳ	-	-
21	Data compression code		圧縮 : 22	"圧縮:",%	(0029, 2F50)
			CC : 22	"CC:",%s	(0029, 2F50)
22	Energy subtraction	Energy subtraction parameter table identification characters Ta, Tb, Tc, Td, and failure flag (only when there is a failure)	T ACGH @	$ES	
23	Right-and-left reversal mark		Я	$AP_PA	

TR1B1026.EPS

To print out attributes other than those listed above, set the relative tag number of the attribute specified in the Conformance Statement.

☞ Conformance Statement

9.4.5 Supplementary Information on Film Annotation Character Setup

■ Layout of film annotation character areas

Film annotation characters printed out on film using the DICOM Print Function are created in the QA-WS system as an image, which, together with the image data, forms the final image to be printed out.
There are two layout patterns for the areas where film annotation characters are to be printed: one is below the image data and the other is on one of the four corners of the image data, as described below.

● Below the image data area (layout pattern 1)

- The film annotation character area is created below the image data area.
- The size of the film annotation character area is pre-fixed, independent of character string length.
- Annotation characters not accommodated in the pre-fixed area will be printed out cut halfway, which will not cause an error.
- If the horizontal width of the image data is shorter than the film annotation character area, the image data will be laid out centered as shown below on the right.

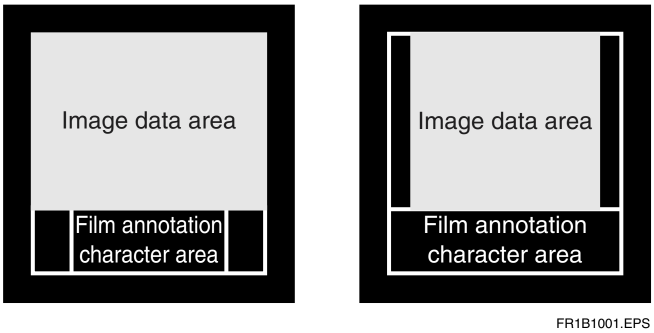
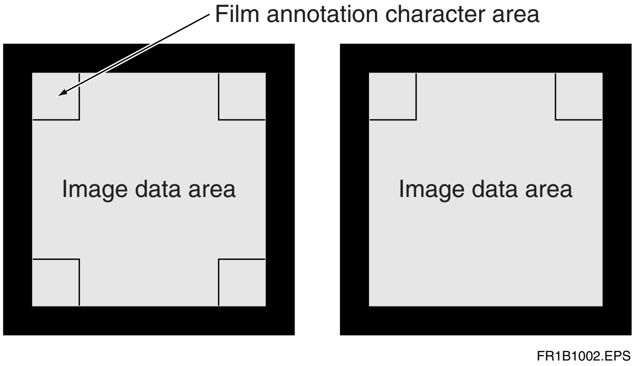


Image data area
Film annotation character area
Image data area
Film annotation character area
FR1B1001.EPS

Layout pattern 1

● On one corner of the image data area (layout pattern 2)

- The film annotation character area is created on one of the four corners of the image data area.
- The maximum size of the four film annotation character areas is pre-set to be the same.
- Annotation characters not accommodated in the pre-set area will be printed out cut halfway, which will not cause an error.
- The size of the film annotation character area will change automatically in accordance with character string length and the number of lines. Parts of the area in which no annotation characters are generated will be deleted automatically.
- The annotation character area will be a square or a rectangle, independent of character string length. The area will depend on maximum character string length.



Layout pattern 2

■ Initial values of the size of the film annotation character area

Use the registry to set the size of the film annotation character areas.

The table below shows the initial values that can be specified as the size.

Format name	Format no.	Layout pattern	Area size	Remarks	
FMT1	1	1	1600×200	Image mag./reduc. rate	100 to 70%
FMT2	2	2	500×400		
FMT3	3	1	1600×200		100% or more
FMT4	4	2	500×400		
FMT5	5	1	2400×350		70% or less
FMT6	6	2	1000×900		100% or less
FMT7	7	1	880×400	1843 standard density 2-image format	
FMT8	8	1	1760×800		

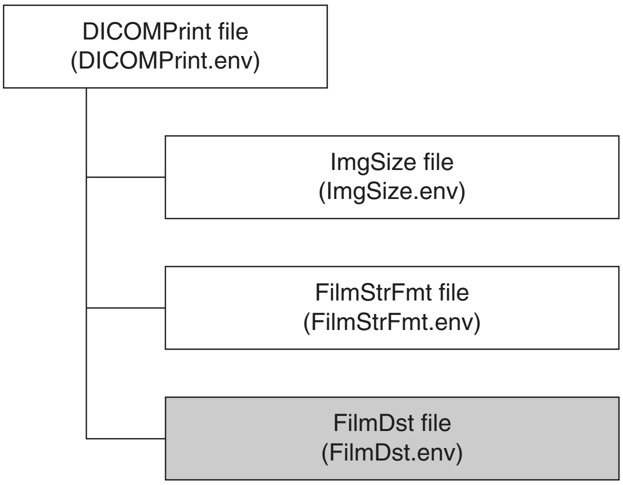
TR1B1013.EPS

9.5 Setting Up the FilmDst File

The FilmDst file (FilmDst.env) must be set up only when the film output destination for the DICOMPrint file has been specified as any of the printer trays (when "BIN_i" has been set to "FILM_DESTINATION").

Apply to the FilmDst file the information used for specifying the BIN number.

This file will be stored in the same directory as the QA-WS operation file ("C:\Program Files\Hi-cx").



FR1B1031.EPS

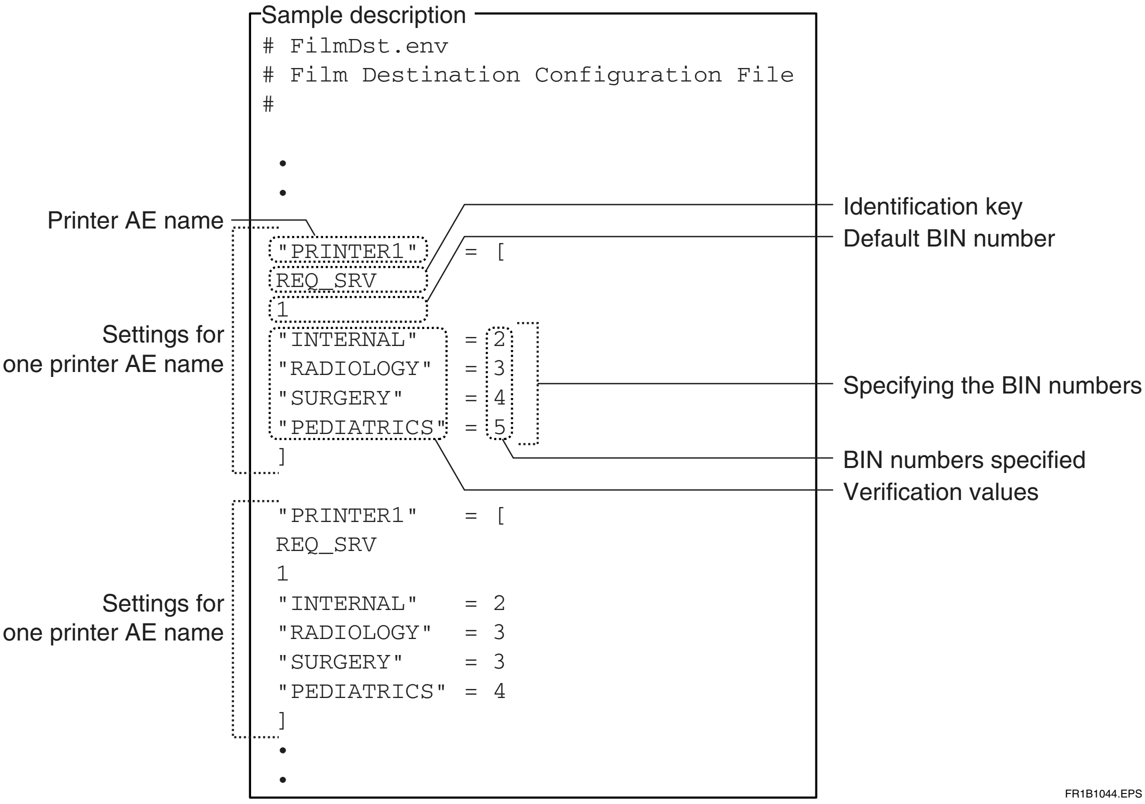
After the optional Print Service software is installed, the contents of the setup will not have been described in the FilmDst file. For this reason, describe the contents of the setup in the FilmDst file in accordance with the type of the printer to be used. If no setup is described in the FilmDst file, the printer setup will be applied.

Describe the setup values for each of the printer's Application Entities (AEs hereafter). When using a multiple number of printers or multiple number of AEs for one printer, you must set the printer's environment information for all AEs used.

9.5.1 FilmDst File Description Format

The FilmDst file description format follows.

● Sample FilmDst file description



Sample description

```
# FilmDst.env
# Film Destination Configuration File
#

 •
 •
 "PRINTER1"    = [
 REQ_SRV
 1
 "INTERNAL"    = 2
 "RADIOLOGY"   = 3
 "SURGERY"     = 4
 "PEDIATRICS"  = 5
 ]
 "PRINTER1"    = [
 REQ_SRV
 1
 "INTERNAL"    = 2
 "RADIOLOGY"   = 3
 "SURGERY"     = 3
 "PEDIATRICS"  = 4
 ]
 •
 •
```

Printer AE name
Settings for one printer AE name
Settings for one printer AE name
Identification key
Default BIN number
Specifying the BIN numbers
BIN numbers specified
Verification values
FR1B1044.EPS

Setting details follow.

❍ Printer AE name

AE name of printer.

❍ Identification key

Information (character strings: information that agrees with that annotated on image data) that identifies BIN numbers.

❍ Default BIN number

The BIN number for printing out image data that matches none of the verification values.

❍ Specifying BIN numbers

Describes the verification values and BIN numbers.

- Verification values
  Describes the names (character strings) and codes (numeric values) specified for each piece of image data in accordance with the identification key.
- BIN numbers
  The BIN numbers (numeric values) are described for printing out image data that matches the verification values. The BIN numbers to be described should agree with the type of printer used.

■ Cautions in creating the FilmDst file

Observe the following cautions when creating the FilmDst file.

- Specify an identification key for each AE.
- Use "[ ]"to specify a group of identification keys, default BIN numbers and BIN numbers.
- If an identification key has not been set up, printer settings will be applied.
- Use one line per setting. A line change will serve as the delimiter code.
- No specific order is required for describing "verification values" = BIN numbers (specifying the BIN numbers).
- A maximum of 128 "verification values" (BIN numbers) can be specified.
- "#" at the beginning of a line indicates a comment line.
- """" indicates that no verification values are available.
- Spaces and/or tabs before and after verification values will be disregarded.
- Do not change lines between a verification value and an identification key.

9.5.2 Changing the FilmDst File

■ Changing the identification key

Change the identification key by changing the "Identification key" settings, which consist of the following.

Identification key	Settings
Requesting department	REQ_SRV
Image generating machine (serial no. identification code)	DEV_CODE
MPM code	MPM
Anatomical region	BODY_PART

■ Changing the default BIN number

Change the default BIN number by changing the number that indicates it.

■ Changing the verification number and the BIN number

Change the verification number and the BIN number by changing the related descriptions.

9.6 Changing the Registry

In the QA-WS system, the registry manages the content of DICOM Print Service settings. Modify settings as necessary.

■ Settings managed by the registry

In the QA-WS system, the registry manages the following settings.

● QA-WS defaults

Registry that manages the QA-WS DICOM Print Service defaults.
This registry is automatically created, as follows, during QA-WS installation.

- Default format number (DEFAULT_FMT_NO)
- Default font type (DEFAULT_FONT_TYPE)
- Default font size (DEFAULT_FONT_SIZE)
- Default tab size (DEFAULT_TAB_SIZE)

● Set values for film annotation character format

Registry that manages set values for the film annotation character format.
This registry will not be created during QA-WS installation. For this reason, its set values should be added using the format described in the FilmStrFmt file (FilmStrFmt.env).

- Format pattern (PATTERN)
  Specifies whether to compose character strings below the image area or on one of the four corners of the image.
- Image size vertically (SIZE_LENGTH)
- Image size horizontally (SIZE_WIDTH)

■ Modifying the registry's setup contents

Use the Windows NT Registry Editor file (RegEdit.exe) to modify settings.
Registry keys to be selected when modifying settings will differ depending on whether there are QA-WS defaults or set values for film annotation character format.

- QA-WS defaults : FILM_LETTER
- Set values for film annotation character format : FMTn

■ Starting up the Registry Editor file (RegEdit.exe)

● Displaying the Windows NT desktop screen

To start up the Registry Editor file (RegEdit.exe), first display the Windows NT desktop screen.

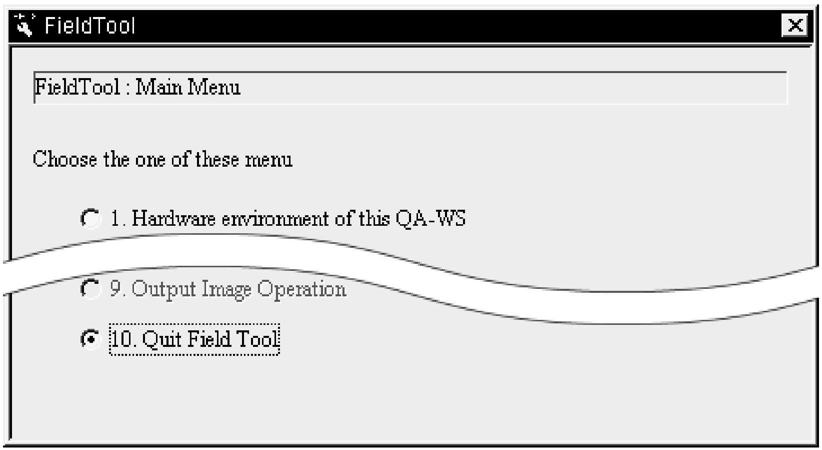
(1) If the QA-WS has been activated, quit it.

When the QA-WS has been quit, Windows NT will automatically shut down, making it possible to turn the equipment's power OFF.

(2) Start up the equipment.

(3) When the start bar appears on the bottom of the screen after the equipment has been started up, hold down the <Shift> key.

The "FieldTool" menu will appear.



FieldTool : Main Menu

Choose the one of these menu

○ 1. Hardware environment of this QA-WS

○ 9. Output Image Operation

● 10. Quit Field Tool

FR1B1039.EPS

(4) Select "10. Quit FieldTool" and click the [OK] button.

The "FieldTool" menu will quit and Windows NT desktop screen will appear.

● Starting up the Registry Editor file

(1) Start up the Windows NT Explorer.

(2) Display the [C:\Winnt] folder on the Windows NT Explorer window.

(3) Double-click the "Registry Editor" in the [C:\Winnt] folder.

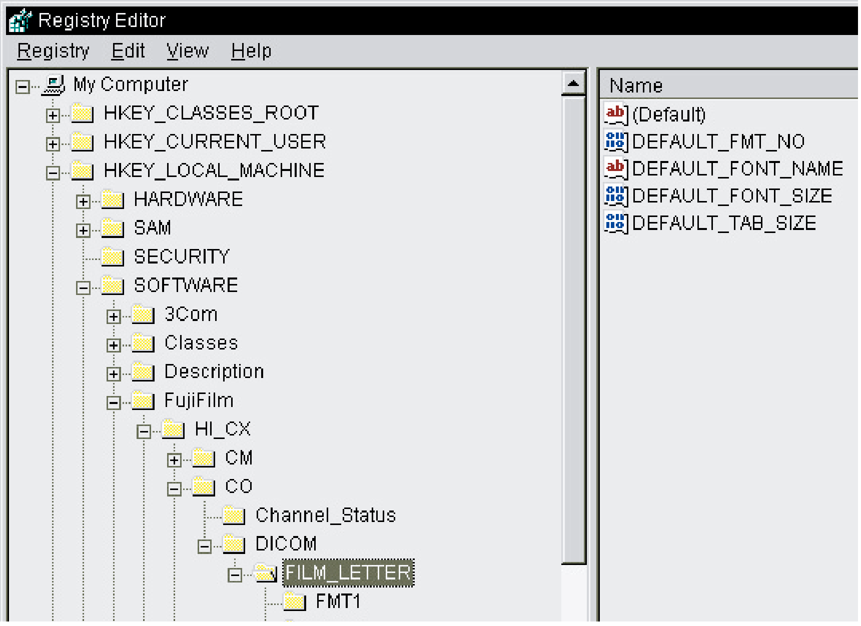
The Registry Editor will start up and the registries will appear.

■ Changing the QA-WS defaults

Change the QA-WS defaults as follows.

(1) Using the Registry Editor, select the registry key shown below.

"My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\FujiFilm\HI_CX\CO\ DICOM \FILM\ LETTER"


Registry Editor
Registry
Edit
View
Help
My Computer
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HARDWARE
SAM
SECURITY
SOFTWARE
3Com
Classes
Description
FujiFilm
HI_CX
CM
CO
Channel_Status
DICOM
FILM_LETTER
FMT1
Name
(Default)
DEFAULT_FMT_NO
DEFAULT_FONT_NAME
DEFAULT_FONT_SIZE
DEFAULT_TAB_SIZE

FR1B1035.EPS

(2) Change the registry data.

The table below shows how to specify data and the permissible range of change.

Registry name	Meaning	Data specification	Default	Permissible range of change
DEFAULT _FMT_NO	Default format no.	8-digit hexadecimal	0x00000001 (1)	Format nos. specified in FilmStrFmt.env.
DEFAULT _FONT_NAME	Default font type	"Font type name"	"Lucida Sans Unicode"	Fonts supported by the system.
DEFAULT _FONT_SIZE	Default font size	8-digit hexadecimal	0x00000028 (40)	0x00000001 (1) ~ 0x00000190 (400)
DEFAULT _TAB_SIZE	Default tab size	8-digit hexadecimal	0x00000050 (80)	0x00000001 (1) ~ 0x00000190 (400)

TR1B1011.EPS

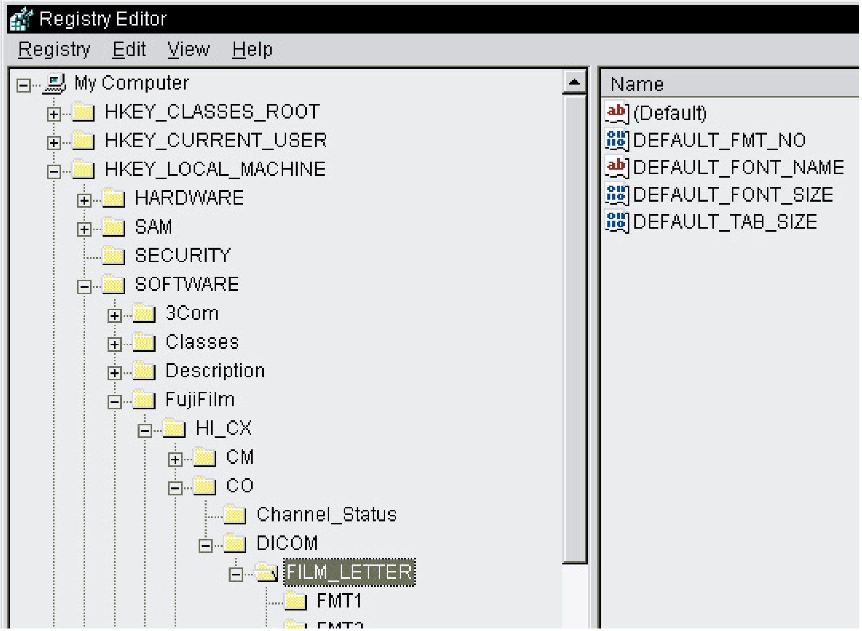
(3) Quit the Registry Editor.

■ Adding set values for film annotation character format

Use the following procedure to add set values for film annotation character format.

(1) Use the Registry Editor to select the following registry key.

"My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\FujiFilm\HI_CX\CO\DICOM\FILM_LETTER"


Registry Editor
Registry
Edit
View
Help
My Computer
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HARDWARE
SAM
SECURITY
SOFTWARE
3Com
Classes
Description
FujiFilm
HI_CX
CM
CO
Channel_Status
DICOM
FILM_LETTER
FMT1
Name
(Default)
DEFAULT_FMT_NO
DEFAULT_FONT_NAME
DEFAULT_FONT_SIZE
DEFAULT_TAB_SIZE

FR1B1036.EPS

(2) Add the film annotation character format registry key to the registry key selected in step "(1)," above. Make sure that the name of the registry key to be added is the same as the film annotation character format (FMTn) of the FilmStrFmt file.

Example) FMT2

(3) Add the following registry data to the registry key added in step "(2)," above.

Registry name	Meaning	Data specification	Default	Permissible range of change
PATTREN	Format pattern that indicates whether to display character strings below the image data area or on one corner of the image data area.	"BOTTOM" or "CORNER"	None	"BOTTOM" or "CORNER"
SIZE _LENGTH	Image size vertically	8-digit hexadecimal	None	None *1
SIZE_WIDTH	Image size horizontally	8-digit hexadecimal	None	None *2

*1: For PATTERN="CORNER," describe character strings so that they do not exceed the image size.
*2: For PATTERN="BOTTOM," describe character strings so that they do not exceed the film's image display area size, if the Requested Image Size is supported.

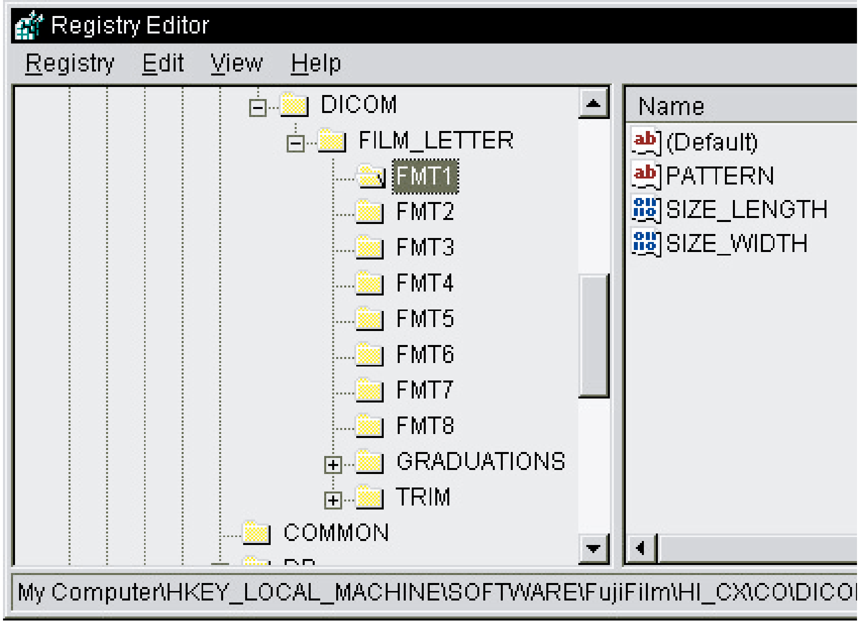
TR1B1012.EPS

(4) Quit the Registry Editor.

■ Changing set values for film annotation character format

Use the following procedure to change the film annotation character format.

(1) Use the Registry Editor to select the following registry key.
"My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\FujiFilm\HI_CX\CO\DICOM\FILM_LETTER\FMTn"
(FMTn: Name of the format you wish to change.)


Registry Editor
Registry
Edit
View
Help
DICOM
FILM_LETTER
FMT1
FMT2
FMT3
FMT4
FMT5
FMT6
FMT7
FMT8
GRADUATIONS
TRIM
COMMON
Name
(Default)
PATTERN
SIZE_LENGTH
SIZE_WIDTH
My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\FujiFilm\HI_CX\CO\DICO

FR1B1037.EPS

(2) Change the registry data.

The table below shows data specifications and the permissible range of change.

Registry name	Meaning	Data specification	Permissible range of change
PATTREN	Format pattern that indicates whether to display character strings below the image data area or on one corner of the image data area.	"BOTTOM" or "CORNER"	"BOTTOM" or "CORNER"
SIZE _LENGTH	Image size vertically	8-digit hexadecimal	None *1
SIZE_WIDTH	Image size horizontally	8-digit hexadecimal	None *2

*1: For PATTERN="CORNER," describe character strings so that they do not exceed the image size.
*2: For PATTERN="BOTTOM," describe character strings so that they do not exceed the film's image display area size, if the Requested Image Size is supported.

TR1B1017.EPS

(3) Quit the Registry Editor.

9.7 Film Annotation Character Checking Tool

In the QA-WS system, the film annotation character checking tool that enables the film annotation characters composed to be checked can be used.

9.7.1 Overview of Film Annotation Character Checking Tool Functions

When images are output from the QA-WS using the DICOM Print Service, character strings (film annotation characters) will be composed on them in accordance with the content of the setup file.

The film annotation character checking tool serves as software for checking the film annotation characters that have been composed. This software makes it possible to verify whether or not the correct settings have been made before images are printed out on film.

■ Generating output character strings using the film annotation character checking tool

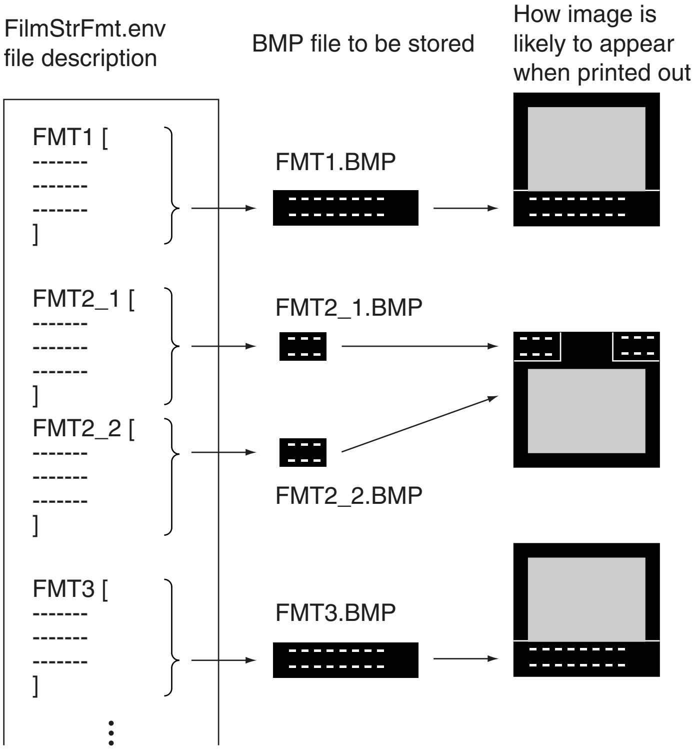
With the film annotation character checking tool, image data of the character strings composed can be generated in accordance with the set content of the FilmStrFmt file.
Data thus generated will be stored as a bit-map image file in the same directory as the data for the QA-WS operation program.

■ Image files to be stored

Image files are stored for each format set in the FilmStrFmt file.

The image file name will be the name of the format set in the FilmStrFmt.env file, with the extension ".BMP" added.

If the following four formats have been set in the FilmStrFmt file, "FMT1," "FMT2_1," "FMT2_2," and "FMT3," the following four image files will be stored if the film annotation character checking tool is operated: "FMT1.BMP," "FMT2_1.BMP," "FMT2_2.BMP," and "FMT3.BMP."


FilmStrFmt.env file description
BMP file to be stored
How image is likely to appear when printed out
FMT1 [

]
FMT2_1 [

]
FMT2_2 [

]
FMT3 [

]
FMT1.BMP
FMT2_1.BMP
FMT2_2.BMP
FMT3.BMP

FR1B1034.EPS

9.7.2 Operating the Film Annotation Character Checking Tool

Start up the film annotation character checking tool and operate it using the following procedure.

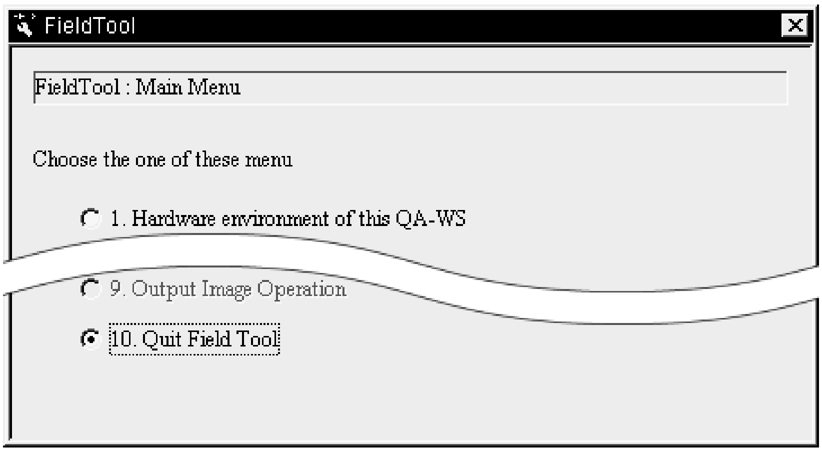
■ Displaying the Windows NT desktop screen

To start up the film annotation character checking tool, first display the Windows NT desktop screen.

(1) If the QA-WS has been activated, quit it.
When the QA-WS has been quit, Windows NT will automatically shut down, making it possible to turn the equipment's power OFF.

(2) Start up the equipment.

(3) When the start bar appears on the bottom of the screen after the equipment has been started up, hold down the <Shift> key.
The "FieldTool" menu will appear.


FieldTool
FieldTool : Main Menu
Choose the one of these menu
○ 1. Hardware environment of this QA-WS
○ 9. Output Image Operation
● 10. Quit Field Tool

FR1B1039.EPS

(4) Select "10. Quit FieldTool" and click the [OK] button.
The "FieldTool" menu will quit and the Windows NT desktop screen will appear.

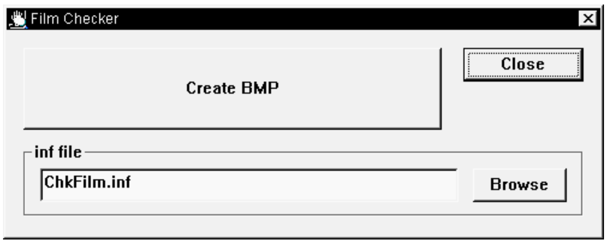
■ Starting up and operating the film annotation character checking tool

Operate this checking tool as follows, while the Windows NT desktop screen is displayed.

(1) Open the directory where the AP is installed ("C\Program Files\Hi_cx").

(2) Double-click the film annotation character checking tool ("Checkfilm.exe").

A screen like the following will appear.



ChkFilm.inf

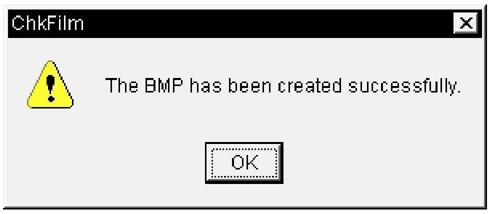
FR1B1040.EPS

(3) Click the [Create BMP] button.

The "Checkfilm.exe" file will be operated and image data on character strings will be generated in accordance with the content set in the FilmStrFmt file.

Image data thus generated will be stored as a bit-map image file in the directory where the AP is installed.

If the operation terminates successfully, the following screen will appear.



The BMP has been created successfully.

FR1B1041.EPS

(4) Click the [OK] button.

(5) Click the [Close] button.

The film annotation character checking tool will quit.

9.7.3 Checking the Contents of the Image File (FMTn.BMP)

After the film annotation character checking tool has been operated, check the contents of the image file created. Because the image file will be in bit-map format, it can be opened by using the Windows NT Paint application.

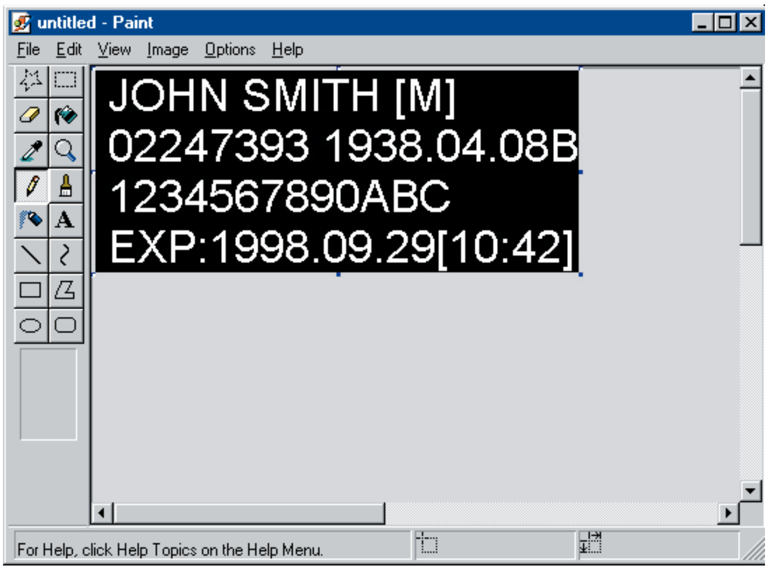
The file content checking procedure using the Paint application is as follows.

(1) Select [Program], [Accessory] and then [Paint] from the Windows NT "Start" menu.
[Paint] will start.

(2) Select [Open] from the "File" menu of [Paint].
The "Open File" dialog will open.

(3) Select the image file (FMTn.BMP) and then click [OPEN] .

An image of the character strings created using the FilmStrFmt file will be displayed.



JOHN SMITH [M]
02247393 1938.04.08B
1234567890ABC
EXP:1998.09.29[10:42]

For Help, click Help Topics on the Help Menu.

FR1B1038.EPS

(4) Based on this image, check whether the content of the image file set with the FilmStrFmt file is correct or not.

(5) Quit the [Paint] application.

9.7.4 Deleting the Image File Created

After the film annotation character checking tool has been used, delete the image file (FMTn.BMP) that was created.

To save on disk memory, make sure to delete the image file created in the directory.

◆ *REFERENCE* ◆

If a past image file has the same name as the new image file created, the former will be overwritten by the latter.

Following is the procedure for deleting image files.

(1) Open the directory ("C:\Hi-cx") that stores the QA-WS operation file.
(2) If the image file (FMTn.BMP) still remains in the Hi-cx directory, select and delete it.

FCR DMS

QA-WS771 Service Manual

APPENDICES

Control Sheet

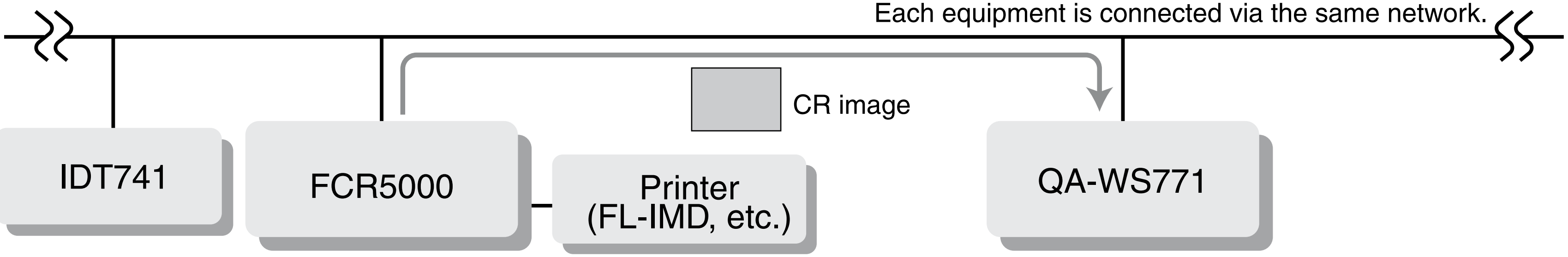
Date of issue	Revision No.	Reason	Applicable pages
9/20/1999	02	Additions (Appendix A, B and C) for 3rd edition (FM2563)	Appendix A1-4, B1-9, C1-18
1/10/2000	02	Corrections (FM2701)	Appendix C8, 10, 12-15
12/20/2000	03	Appendix numbers changed because previous Appendix A was incorporated into the Maintenance section causing thus the following appendices to be moved up consequently. (FM2908)	All pages
7/10/2001	04	Corrections and additions for software upgrade to ver. A05 and Precision 330, together with other corrections (FM3067)	0, 00, B-29
6/20/2003	08	Addition (Appendix D) for 9th edition (FM3987)	All pages
11/20/2003	09	Corrections (FM4117)	0, 00, Appendix D1-4

Appendix A Setup for Transmitting CR Images from FCR5000 to QA-WS771

◆Requirements

	FCR5000	**QA-WS771**
Software version	A07 or later	A01 or later
Option key software	Base on DICOM key (standard fo A08 or later)	Standard
Additional PC Boards	HCP08A (113Y7041G or later)	Standard
	CPU90F	

◆Connection Diagram


Each equipment is connected via the same network.
CR image
IDT741
FCR5000
Printer (FL-IMD, etc.)
QA-WS771

Setup Example of FCR5000

- HOST Name : fcr5000-I
- IP address : 172.16.0.102
- AE name (User) : 5000_DICOM
- Service Class : CR Storage
  Transfer Syntax - Image data compression defined : JPEG LossLess

Setup Example of This Equipment (QA-WS771)

- HOST Name : qaws1
- IP address : 172.16.0.24
- AE name (Provider) : qaws1-scp
- Port No.* : 5045
- Service Class : CR Storage
- Transfer Syntax : JPEG LossLess

*If the AE is "Provider", be sure to set up the unique Port No. in the network from 5001 to 5999.

Setup Flow in Each Equipment

FCR5000 Setup Flow

SYSTEM setup · · · Page 3

EQUIPMENT setup · · · Page 3

NETWORK HOST INTERFACE setup · · · Page 4

HOSTS ADDRESS setup · · · Page 4

QA-WS771 Connection setup · · · page 5

- Setting the information of This Equipment (FCR5000) (AE name, Service Class, etc.)
- Setting the information of Other Connected Host (QA-WS771) (AE name, Service Class, Port No., etc.)

QA-WS771 Setup Flow

AE Name and Port No. setups · · · Page 6

Service Class and Transfer Syntax setups · · · Page 7

- Setting the information of This Equipment

HOST and IP Address setups · · · Page 8

Setups of AE Name, Port No., Service Class and Transfer Syntax · · · Page 9

- Setting the information of Other Connected Host (FCR5000)

Setting the FCR5000 (1/3)

◆SYSTEM Setup (IRSET.CFG)

Example:

```
# IRSET.ORG/CFG
#
       :
IPS = "172.16.0.101"
#3.IP Address(CPU90E)(Length=15)
IPI = "172.16.0.102"
#4.IP Address(CPU90F)(Length=15)
       :
```

Set up the IP address of This Equipment.

Set up an IP address different for both CPU90E and CPU90F boards, because the two network boards have to be installed.

◆EQUIMENT Setup (EQUIP)

Example:

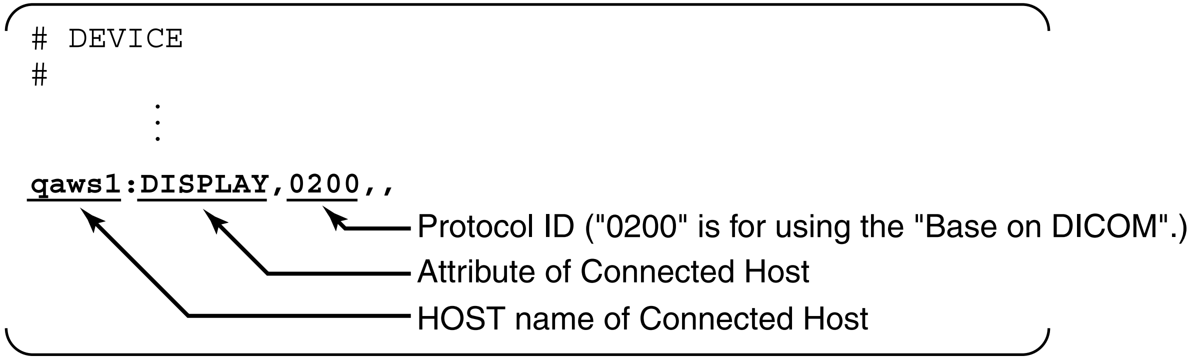
```
# EQUIP
#
       :
IDT idt4-1 idt4-2
DISPLAY qaws1
PRINT  LOCAL_R
```

Set up the QA-WS as the image display equipment.

Setting the FCR5000 (2/3)

◆NETWORK HOST INTERFACE Setup (DEVICE)

Example:



```
# DEVICE
#
        :
qaws1:DISPLAY,0200,,
```

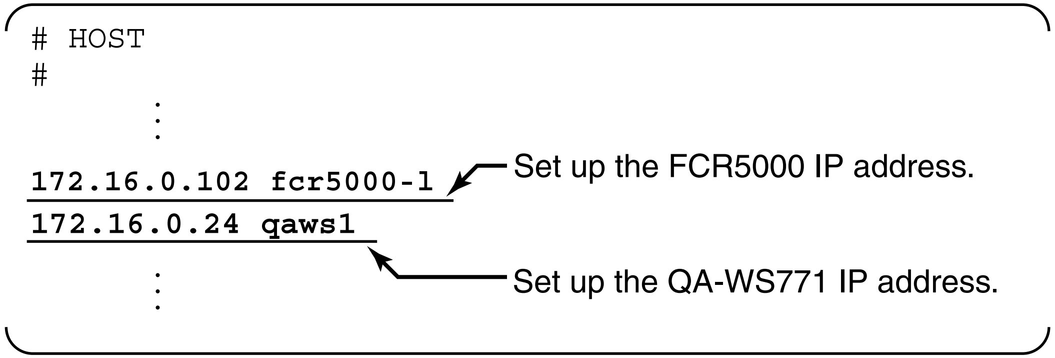
Protocol ID ("0200" is for using the "Base on DICOM".)

Attribute of Connected Host

HOST name of Connected Host

◆HOST ADDRESS Setup (HOSTS)

Example:



```
# HOST
#
        :
172.16.0.102 fcr5000-1
172.16.0.24 qaws1
        :
```

Set up the FCR5000 IP address.

Set up the QA-WS771 IP address.

Setting the FCR5000 (3/3)

◆QA-WS771 Connection Setup

Example:

```
# Dicom
#
      :
      :
A         B         C           E F G   H
fcr5000-1,STORAGE_U:5000_DICOM,,1,1,100,180
qaws1,STORAGE_P:qaws1-scp,5045,1,1,100,180
A     B         C         D    E F G   H
```

Setup for This Equipment (FCR5000)

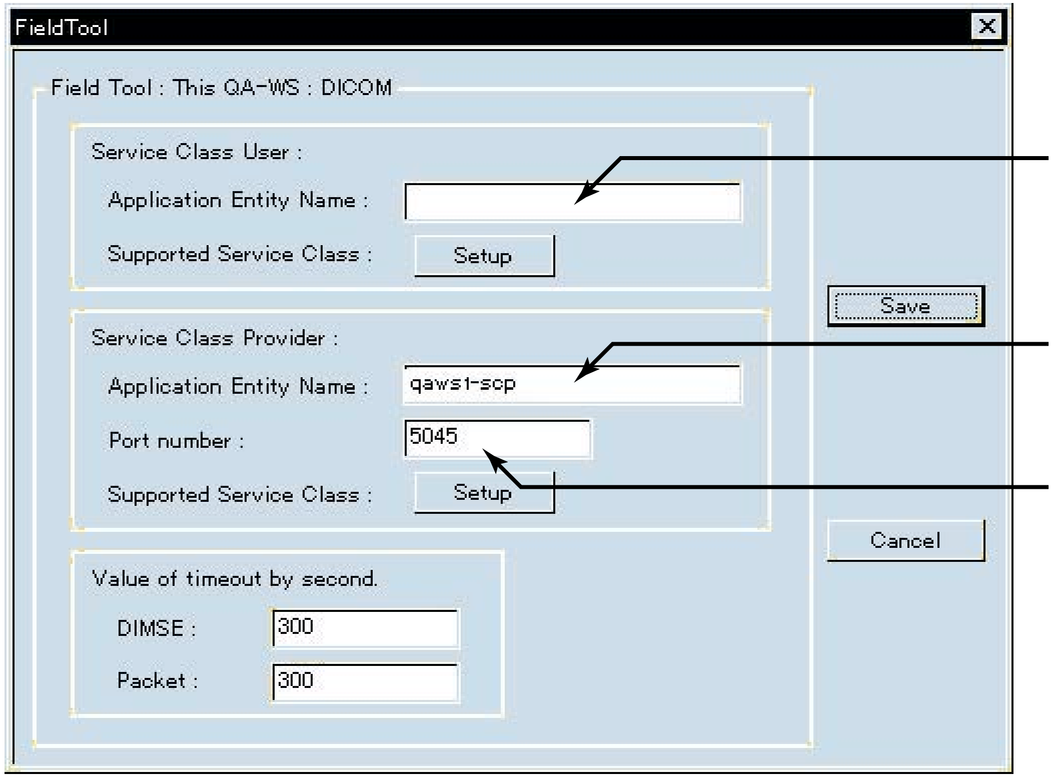
Setup for the Other Connected Host (QA-WS771)

A : HOST Name
B : Service Class
C : AE Name
D : Port No. of SCP (TCP)
E : SOP Type ("1" is for "Fuji Private Key".)
F : Image data compression defined ("1" is for JPEG-compressed image data.)
G, H : Timeout value (sec.)

Setting the QA-WS771 (1/4)

◆AE Name and Port No. Setups for This Equipment

Example:


FieldTool
Field Tool : This QA-WS : DICOM
Service Class User :
Application Entity Name :
Supported Service Class :
Setup
Save
Service Class Provider :
Application Entity Name :
qaws1-scp
Port number :
5045
Supported Service Class :
Setup
Cancel
Value of timeout by second.
DIMSE :
300
Packet :
300

No entry here (for User setup) because the FCR5000 is the User and the QA-WS771 is the Provider.

Enter the AE name supported by This Equipment (for Provider setup).

Enter the Port No.

– Activating the above screen –

(1) Select ● 2. Network environment on the FieldTool "Main Menu" screen.

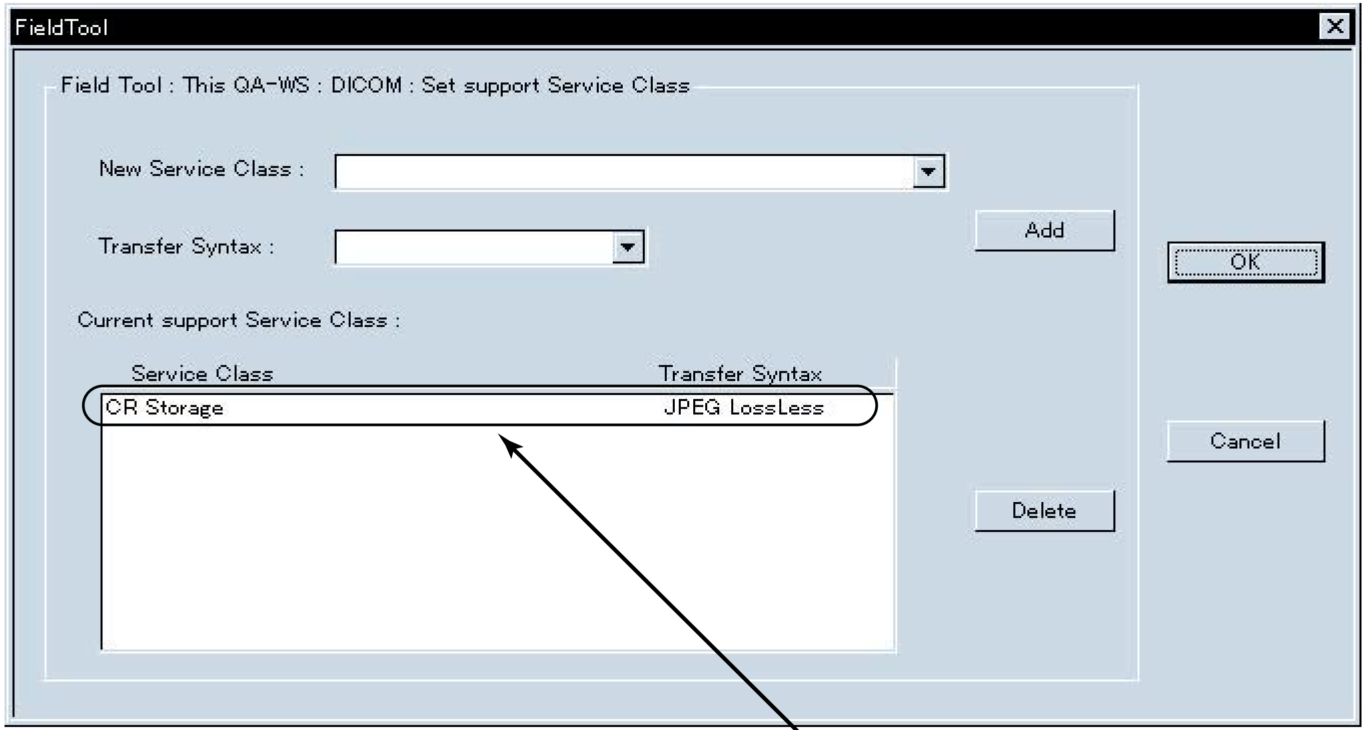
(2) Select ● 1. This QA-WS on the "Network environment" screen.

(3) Click Setup on ☑ DICOM Setup ("FieldTool: This QA-WS" screen).

Setting the QA-WS771 (2/4)

◆Service Class and Transfer Syntax Setups for This Equipment

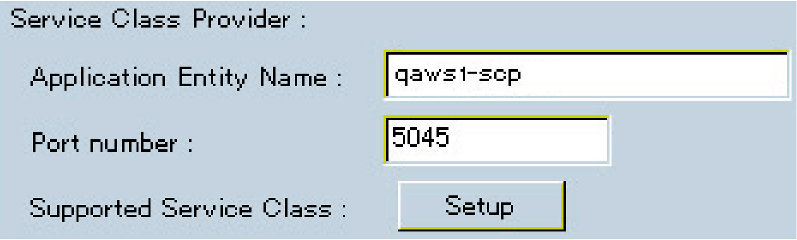
Example:


FieldTool
Field Tool : This QA-WS : DICOM : Set support Service Class
New Service Class :
Transfer Syntax :
Add
OK
Current support Service Class :
Cancel
Delete

Service Class	Transfer Syntax
CR Storage	JPEG LossLess

Set up the Service Class and Transfer Syntax of the AE supported by This Equipment.

– Activating the above screen –

(1) Click **Setup** in  appearing on the page 6 screen.

Service Class Provider :

Application Entity Name : qaws1-scp

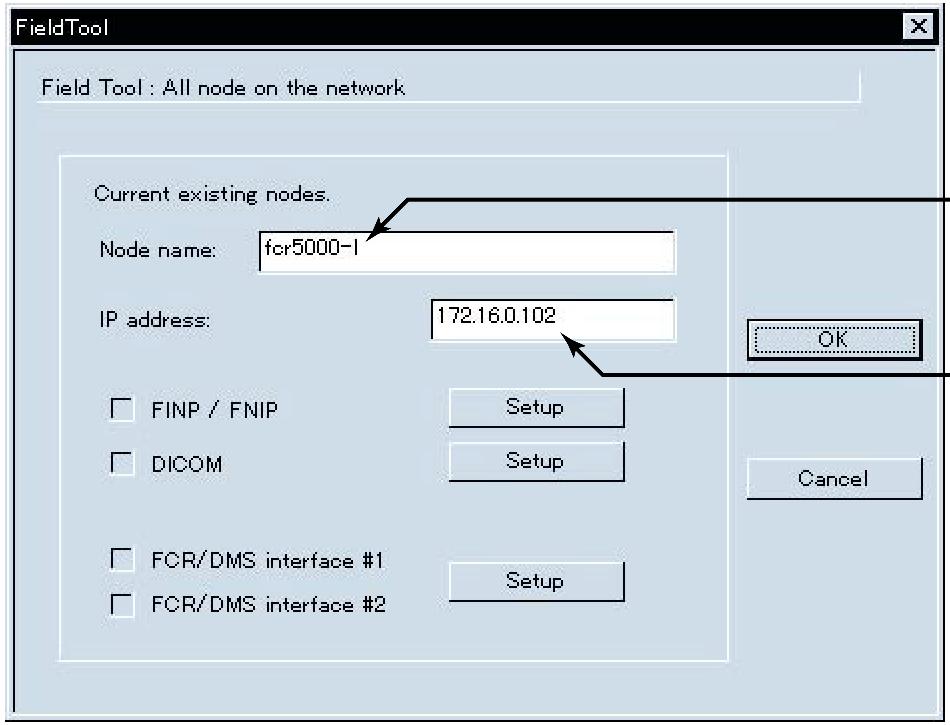
Port number : 5045

Supported Service Class : Setup

Setting the QA-WS771 (3/4)

◆HOST Name and IP Address Setups for the Other Connected Host

Example:



Current existing nodes.

Node name: fcr5000-I

IP address: 172.16.0.102

☐ FINP / FNIP

☐ DICOM

☐ FCR/DMS interface #1

☐ FCR/DMS interface #2

Enter the HOST name of Other Connected Host (FCR5000).

Enter the IP address of Other Connected Host (FCR5000).

– Activating the above screen –

(1) Select ● 2. Network environment on the FieldTool "Main Menu" screen.

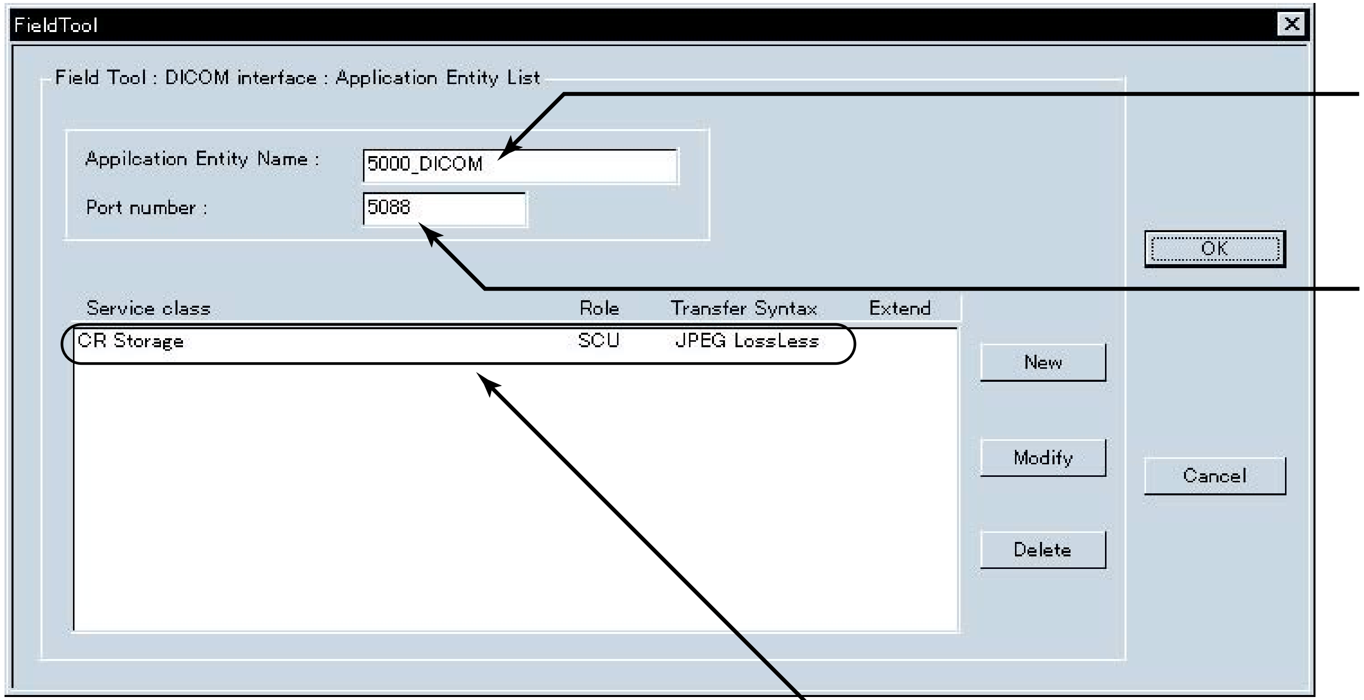
(2) Select ● 2. All nodes on the network on the "Network environment" screen.

(3) Click New on "All node on the network" screen.

Setting the QA-WS771 (4/4)

◆Setups of AE Name, Port No., Service Class and Transfer Syntax for the Other Connected Host (FCR5000)

Example:



Field Tool : DICOM interface : Application Entity List

Appilcation Entity Name : 5000_DICOM

Port number : 5088

Service class	Role	Transfer Syntax	Extend
CR Storage	SCU	JPEG LossLess	

Enter the AE name supported by Other Connected Host (FCR5000).

Enter the Port No.

Any number from 5001 to 5999 can be entered because the SCU port number is not referred to by the Provider.

Set here the Service Class and Transfer Syntax of the AE name supported by Other Connected Host (FCR5000).

– Activating the above screen –

(1) Click Setup in ☑ DICOM Setup appearing on the page 8 screen.

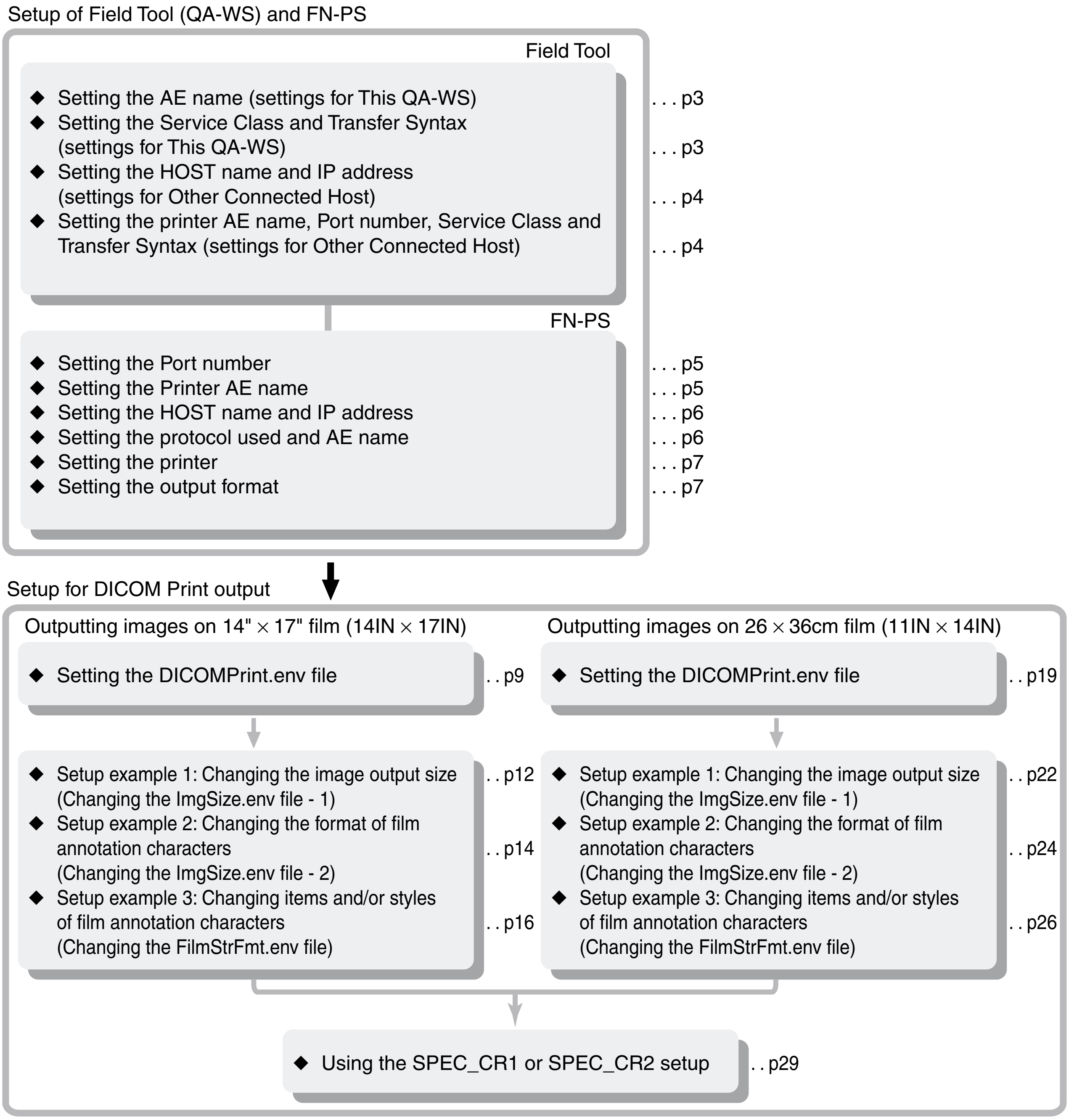
(2) Click New on the "All node on the network: DICOM interface" screen.

Appendix B Setup for DICOM Print Output from QA-WS to FN-PS551

Set the following to output print from QA-WS to FN-PS551 using the DICOM Print function.

- Setup of Field Tool (QA-WS) and FN-PS
- Setup for DICOM Print output (QA-WS)

◆ Setup flow



Setup of Field Tool (QA-WS) and FN-PS

Field Tool

- ◆ Setting the AE name (settings for This QA-WS) . . . p3
- ◆ Setting the Service Class and Transfer Syntax (settings for This QA-WS) . . . p3
- ◆ Setting the HOST name and IP address (settings for Other Connected Host) . . . p4
- ◆ Setting the printer AE name, Port number, Service Class and Transfer Syntax (settings for Other Connected Host) . . . p4

FN-PS

- ◆ Setting the Port number . . . p5
- ◆ Setting the Printer AE name . . . p5
- ◆ Setting the HOST name and IP address . . . p6
- ◆ Setting the protocol used and AE name . . . p6
- ◆ Setting the printer . . . p7
- ◆ Setting the output format . . . p7

Setup for DICOM Print output

Outputting images on 14" × 17" film (14IN × 17IN)

- ◆ Setting the DICOMPrint.env file . . p9
- ◆ Setup example 1: Changing the image output size (Changing the ImgSize.env file - 1) . . p12
- ◆ Setup example 2: Changing the format of film annotation characters (Changing the ImgSize.env file - 2) . . p14
- ◆ Setup example 3: Changing items and/or styles of film annotation characters (Changing the FilmStrFmt.env file) . . p16

Outputting images on 26 × 36cm film (11IN × 14IN)

- ◆ Setting the DICOMPrint.env file . . p19
- ◆ Setup example 1: Changing the image output size (Changing the ImgSize.env file - 1) . . p22
- ◆ Setup example 2: Changing the format of film annotation characters (Changing the ImgSize.env file - 2) . . p24
- ◆ Setup example 3: Changing items and/or styles of film annotation characters (Changing the FilmStrFmt.env file) . . p26

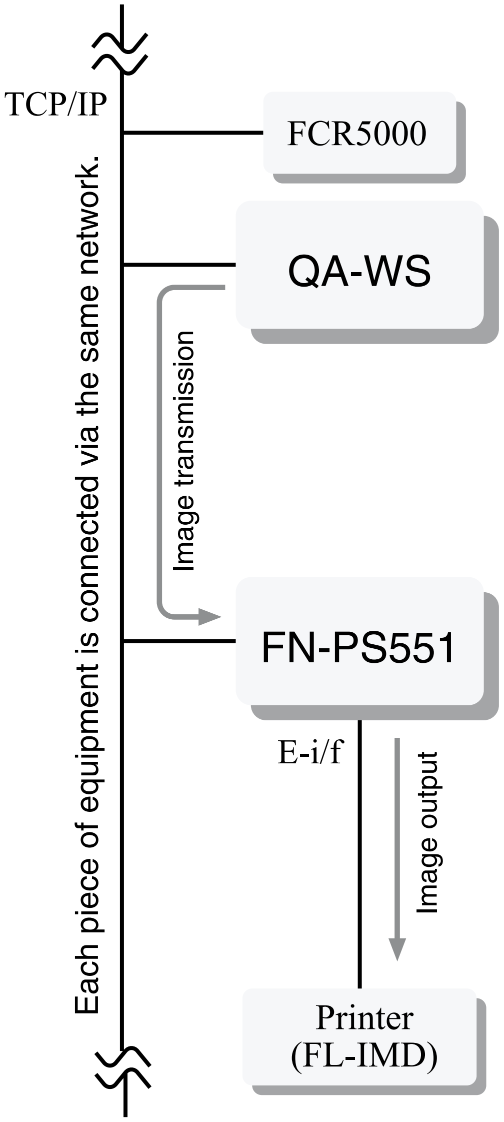
- ◆ Using the SPEC_CR1 or SPEC_CR2 setup . . p29

◆ Requirements

	QA-WS	FN-PS551
Software version	A04 or later	A03 or later
Option key software	DICOM Print key	DICOM Registry key
PC boards	Standard	Standard

1. Setup of Field Tool (QA-WS) and FN-PS

Following the connection diagram below, set up each equipment.


TCP/IP
FCR5000
QA-WS
Image transmission
FN-PS551
E-i/f
Image output
Printer (FL-IMD)
Each piece of equipment is connected via the same network.

Field Tool (QA-WS) setup

- HOST name : qaws1*
- IP address : 172.16.0.24*
- AE name (User) : qaws1-scu*
- Service Class : Basic Grayscale Print Management Meta SOP Class
- Transfer Syntax : LEI

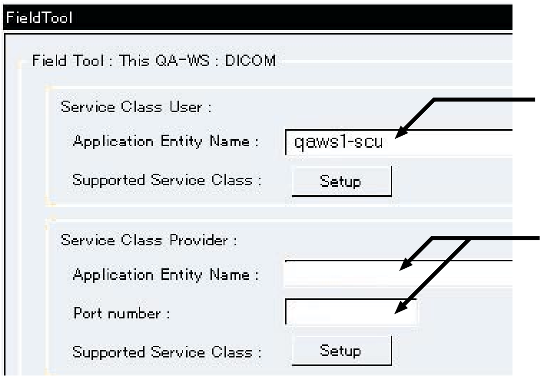
FN-PS setup

- HOST name : fn-ps551*
- IP address : 172.16.0.41*
- AE name (Provider) : Printer1*
- Port number : 104
- Service Class : Basic Grayscale Print Management Meta SOP Class
- Transfer Syntax : LEI

Items marked with * indicate setup examples. Change these items as required depending on the equipment used or network environment.

◆ Setup of Field Tool (1/4) : Setting the AE name (settings for This QA-WS)

Setup example


FieldTool

Field Tool : This QA-WS : DICOM

Service Class User :

Application Entity Name : qaws1-scu

Supported Service Class : Setup

Service Class Provider :

Application Entity Name :

Port number :

Supported Service Class : Setup

Enter the AE name that This QA-WS supports.

For only the DICOM Print service no entries are necessary here because QA-WS is the User and FN-PS is the Provider.

– Activating the above screen –

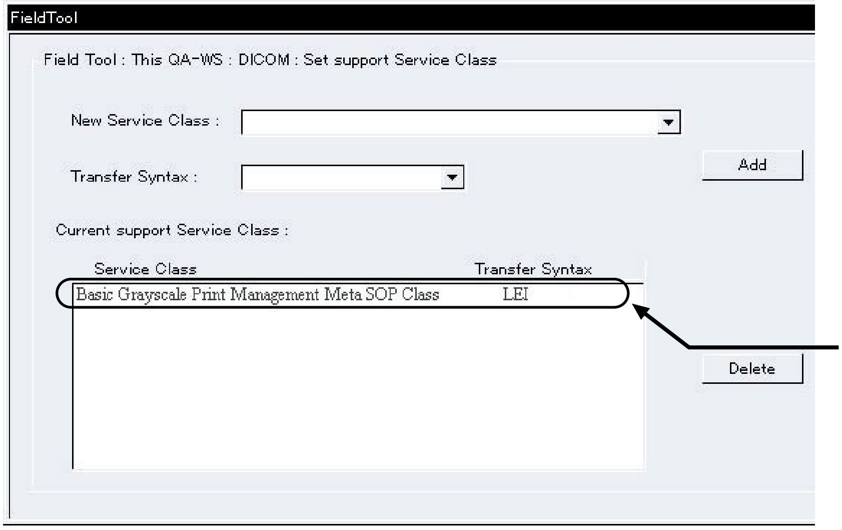
(1) Select ● 2. Network environment on the Field Tool “Main Menu” screen.

(2) Select ● 1. This QA-WS on the “Network environment” screen.

(3) Click Setup on ☑ DICOM Setup
(“Field Tool: This QA-WS” screen).

◆ Setup of Field Tool (2/4) : Setting the Service Class and Transfer Syntax (settings for This QA-WS)

Setup example


FieldTool

Field Tool : This QA-WS : DICOM : Set support Service Class

New Service Class :

Transfer Syntax :

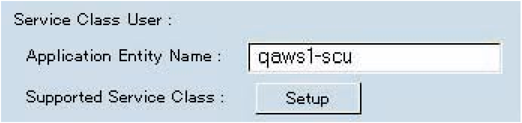
Current support Service Class :

Service Class	Transfer Syntax
Basic Grayscale Print Management Meta SOP Class	LEI

Set the Service Class and Transfer Syntax that This QA-WS supports.

– Activating the above screen –

(1) Click Setup on


Service Class User :

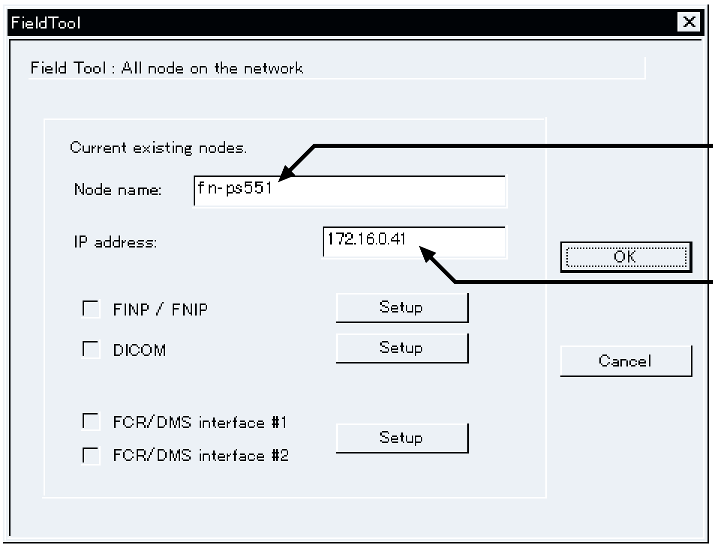
Application Entity Name : qaws1-scu

Supported Service Class : Setup

(screen appearing in Setup of Field Tool (1/4) above).

◆ Setup of Field Tool (3/4) : Setting the HOST name and IP address (settings for Other Connected HOST)

Setup example


FieldTool
Field Tool : All node on the network
Current existing nodes.
OK
Cancel
Setup
Setup
Setup

Node name: fn-ps551

IP address: 172.16.0.41

☐ FINP / FNIP

☐ DICOM

☐ FCR/DMS interface #1

☐ FCR/DMS interface #2

Enter the Other Connected HOST name.

Enter the IP address of Other Connected HOST.

– Activating the above screen –

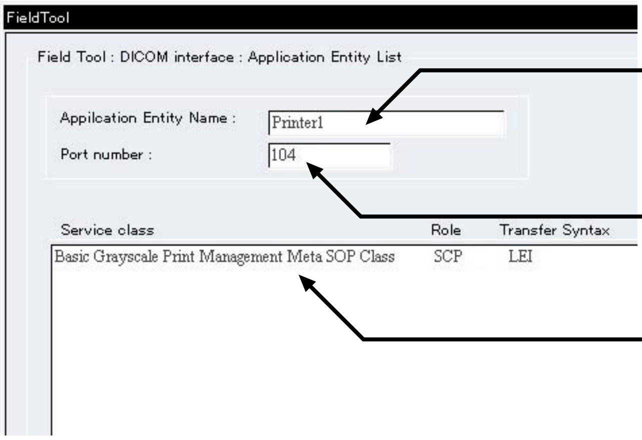
(1) Select ● 2. Network environment on the Field Tool “Main Menu” screen.

(2) Select ● 2. All nodes on the network on the “Network environment” screen.

(3) Click New on the “All node on the network” screen.

◆ Setup of Field Tool (4/4) : Setting the printer AE name, Port number, Service Class and Transfer Syntax (settings for Other Connected HOST)

Setup example


FieldTool
Field Tool : DICOM interface : Application Entity List

Appilcation Entity Name : Printer1

Port number : 104

Service class	Role	Transfer Syntax
Basic Grayscale Print Management Meta SOP Class	SCP	LEI

Enter the AE name that the Other Connected HOST (FN-PS) supports (fixed at "Printer1").

Enter the Port number (fixed at "104").

Set the Service Class and Transfer Syntax of the AE that the Other Connected HOST (FN-PS) supports.

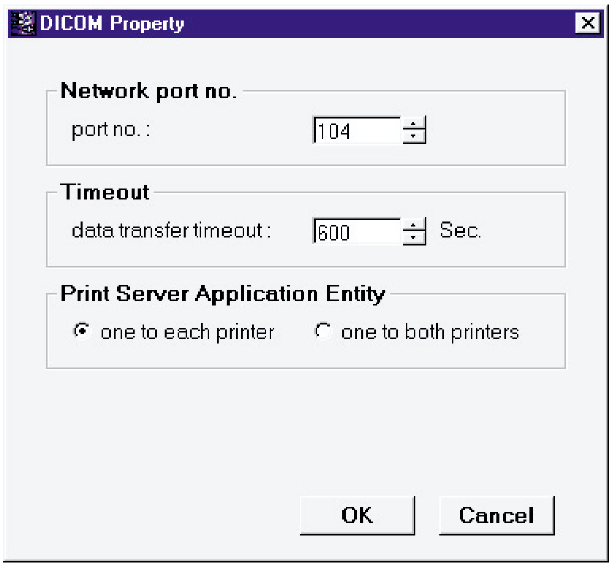
– Activating the above screen –

(1) Click Setup on ☑ DICOM Setup (screen appearing in Setup of Field Tool (3/4) above).

(2) Click New on the “All node on the network: DICOM interface” screen.

◆ Setup of FN-PS (1/6) : Setting the Port number

Setup example


DICOM Property
Network port no.
Timeout
Print Server Application Entity
OK
Cancel

port no. : 104

data transfer timeout : 600 Sec.

● one to each printer ○ one to both printers

Make no modifications leaving as is the default.

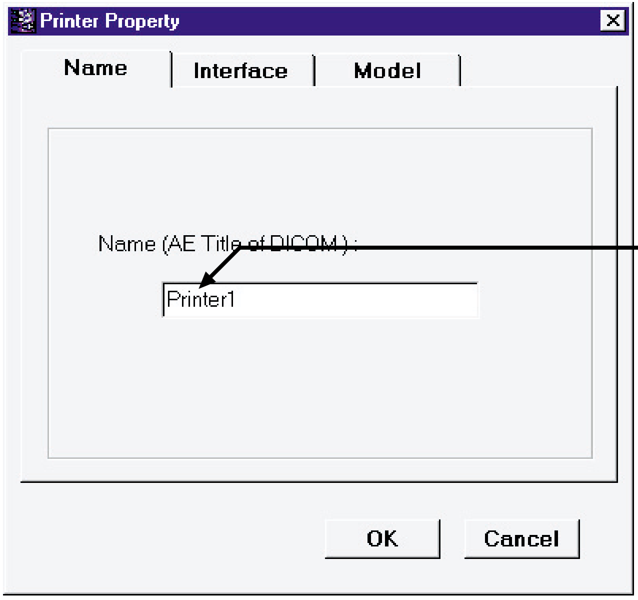
– Activating the above screen –

(1) Click the “Protocols” tab on the FN-PS “SERVICE UTILITY” screen.

(2) Click “Add...”.

◆ Setup of FN-PS (2/6) : Setting the printer AE name

Setup example


Printer Property
Name
Interface
Model
OK
Cancel

Name (AE Title of DICOM) : Printer1

Enter the AE name (“Printer1”).

* The FN-PS system recognizes both capitals and small letters. Be sure to correctly enter being careful whether it is a capital or a small letter.

– Activating the above screen –

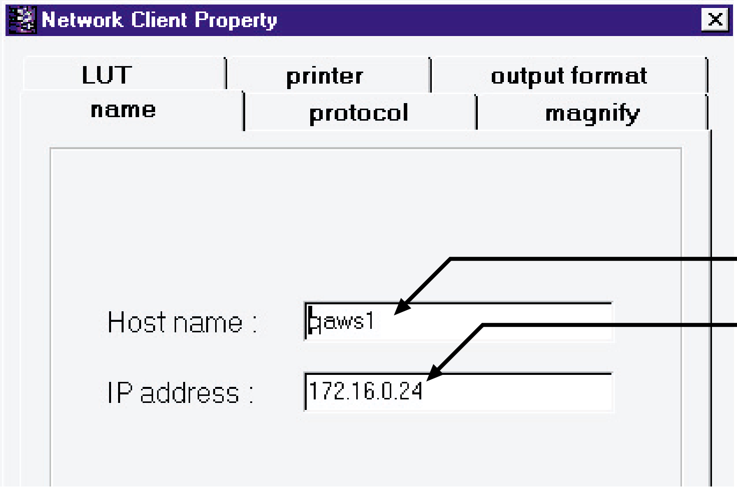
(1) Click the “Printer” tab on the FN-PS “SERVICE UTILITY” screen.

(2) Click the “Name” tab on the “Printer Property” screen.

(3) Click “Add...”.

◆ Setup of FN-PS (3/6) : Setting the HOST name and IP address

Setup example


Network Client Property
LUT
printer
output format
name
protocol
magnify

Host name : qaws1

IP address : 172.16.0.24

Enter the Other Connected HOST name (QA-WS).

Enter the IP address.

– Activating the above screen –

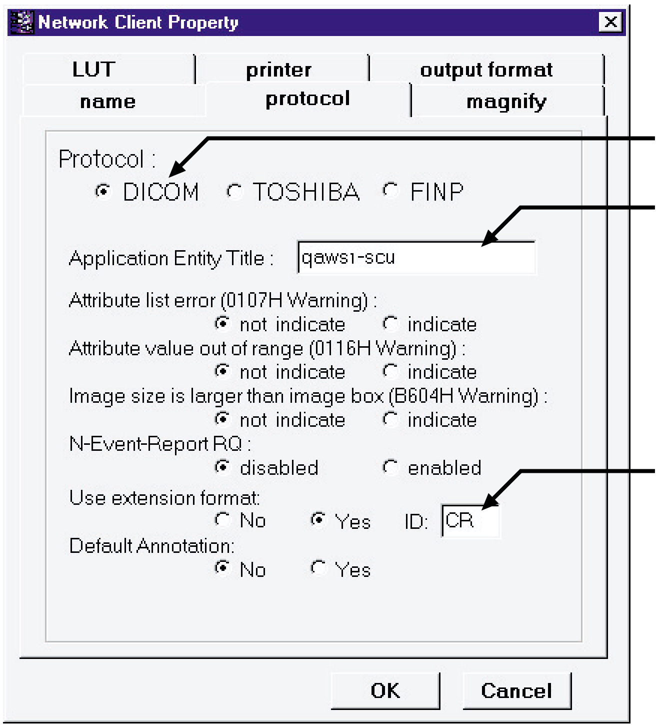
(1) Click the “Client” tab on the FN-PS “SERVICE UTILITY” screen.

(2) Click “Add...”.

(3) Click the “name” tab on the “Network Client Property” screen.

◆ Setup of FN-PS (4/6) : Setting the protocol used and AE name

Setup example


Network Client Property
LUT
printer
output format
name
protocol
magnify
OK
Cancel

Protocol :
● DICOM ○ TOSHIBA ○ FINP

Application Entity Title : qaws1-scu

Attribute list error (0107H Warning) :
● not indicate ○ indicate

Attribute value out of range (0116H Warning) :
● not indicate ○ indicate

Image size is larger than image box (B604H Warning) :
● not indicate ○ indicate

N-Event-Report RQ :
● disabled ○ enabled

Use extension format:
○ No ● Yes ID: CR

Default Annotation:
● No ○ Yes

Select “DICOM”.

Enter the AE name of Other Connected HOST (QA-WS).

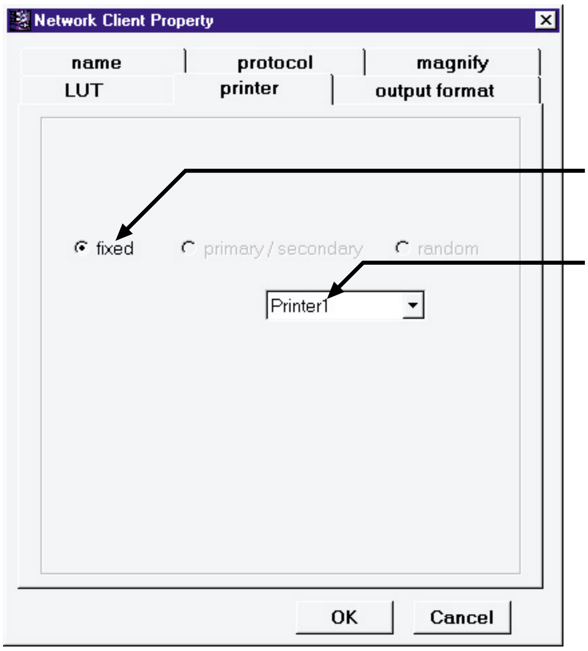
Select “Yes”.
Enter “CR” as the ID.

– Activating the above screen –

(1) Click the “protocol” tab on the “Network Client Property” screen.

◆ Setup of FN-PS (5/6) : Setting the printer

Setup example


Network Client Property
name
protocol
magnify
LUT
printer
output format
OK
Cancel

● fixed ○ primary / secondary ○ random

Printer1

Make sure that “fixed” has been selected when only one printer is connected.

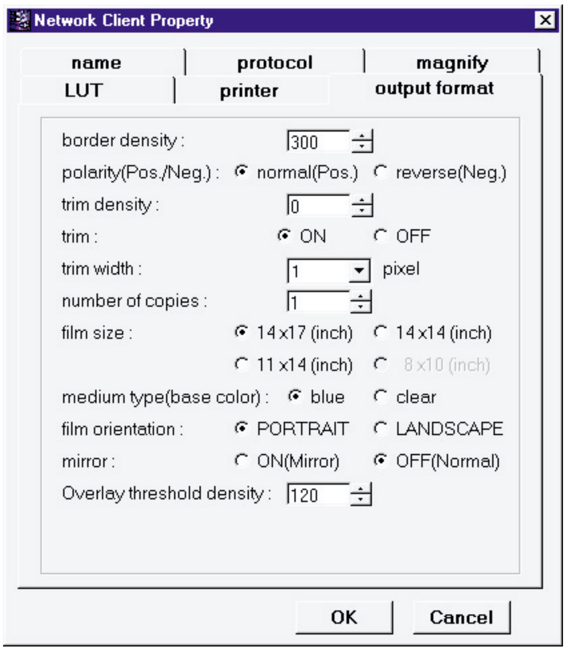
Enter the printer AE name. (Fixed at “Printer1”.)

– Activating the above screen –

(1) Click the “printer” tab on the “Network Client Property” screen.

◆ Setup of FN-PS (6/6) : Setting the output format

Setup example


Network Client Property
name
protocol
magnify
LUT
printer
output format
OK
Cancel

border density : 300

polarity(Pos./Neg.) : ● normal(Pos.) ○ reverse(Neg.)

trim density : 0

trim : ● ON ○ OFF

trim width : 1 pixel

number of copies : 1

film size : ● 14x17 (inch) ○ 14x14 (inch) ○ 11x14 (inch) ○ 8x10 (inch)

medium type(base color) : ● blue ○ clear

film orientation : ● PORTRAIT ○ LANDSCAPE

mirror : ○ ON(Mirror) ● OFF(Normal)

Overlay threshold density : 120

Set various items for film output. (These settings are possible also on the QA-WS side. Items set here will be effective if no settings have been made on the QA-WS side.)

– Activating the above screen –

(1) Click the “output format” tab on the “Network Client Property” screen.

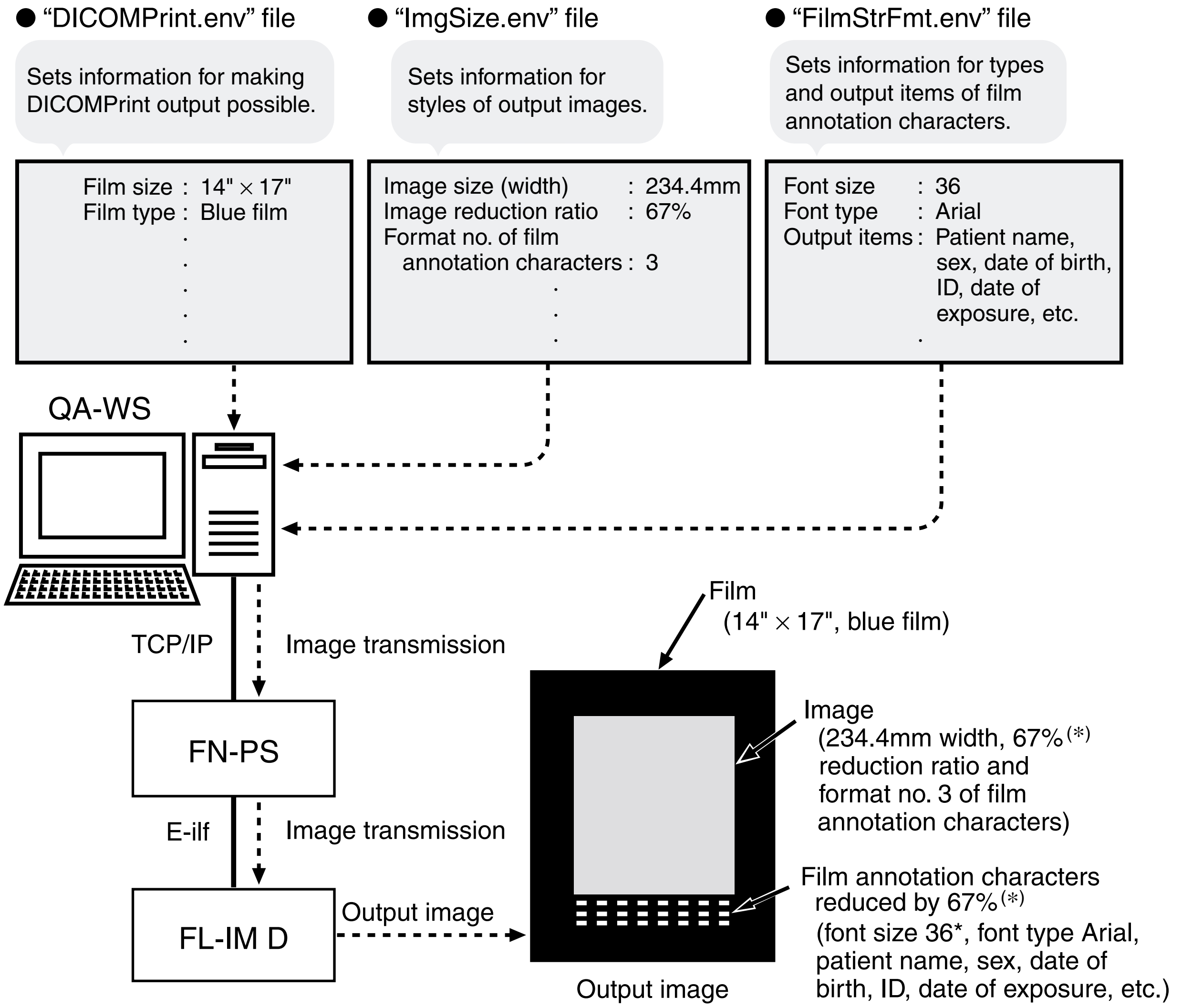
2. Setup for DICOM Print Output (QA-WS)

For DICOM Print output, use the following three setup files. Described herein are setup procedures of the three files: DICOMPrint.env, ImgSize.env and FilmStrFmt.env.
These setup files are stored in the “C:\Program Files\Hi-cx” directory.

- “DICOMPrint.env” file
- “ImgSize.env” file
- “FilmStrFmt.env” file

To make DICOM Print output effective, be sure to set up the “DICOMPrint.env” file. Change settings of the “ImgSize.env” and/or “FilmStrFmt.env” files as required.
When modifying styles (image magnification/reduction ratios and format numbers of film annotation characters) of the output image, change settings of the “ImgSize.env” file. For modification of types of film annotation characters and information of output items, change settings of the “FilmStrFmt.env” file.

Correlation between the setup files and the output image :



● “DICOMPrint.env” file

Sets information for making DICOMPrint output possible.

Film size : 14" × 17"
Film type : Blue film
.
.
.
.
.

● “ImgSize.env” file

Sets information for styles of output images.

Image size (width) : 234.4mm
Image reduction ratio : 67%
Format no. of film annotation characters : 3
.
.
.

● “FilmStrFmt.env” file

Sets information for types and output items of film annotation characters.

Font size : 36
Font type : Arial
Output items : Patient name, sex, date of birth, ID, date of exposure, etc.
.

QA-WS
TCP/IP
Image transmission
FN-PS
E-ilf
Image transmission
FL-IM D
Output image
Film
(14" × 17", blue film)
Image
(234.4mm width, 67%(*) reduction ratio and format no. 3 of film annotation characters)
Film annotation characters reduced by 67%(*)
(font size 36*, font type Arial, patient name, sex, date of birth, ID, date of exposure, etc.)
Output image

* On the output image, film annotation characters in the 36-point font will be reduced to and displayed in 67% in accordance with the image reduction ratio (67%).

2.1 Outputting Images on 14” × 17” Film (14IN × 17IN)

◆ Setting the DICOMPrint.env File

(1) Display the Windows NT desktop screen.

(2) Activate the NotePad (memo) and open the “DICOMPrint.env” file stored in the “C:\Program Files\Hi-cx” directory.

(3) Copy the Example section in the file as follows and delete the comment marks (#).

Setup example

```
# DEVICE# DICOMPrint.env
# DICOM Print Environment Configuration File
#
                    .
                    .
                    .
# Example
#
# "Printer AE Title" = [
# MEDIUM_TYPE = "BLUE FILM"
# FILM_DESTINATION = "PROCESSOR"
# FILM_SIZE_ID = "10INX12IN"
# MAG_TYPE = "CUBIC"
# BORDER_DENSITY = "WHITE"
# TRIM = "YES"
# REQ_IMG_SIZE = "SUPPORTED"
# 10BITS_STORED = "SUPPORTED"
# ]
#
"Printer AE Title" = [
MEDIUM_TYPE = "BLUE FILM"
FILM_DESTINATION = "PROCESSOR"
FILM_SIZE_ID = "10INX12IN"
MAG_TYPE = "CUBIC"
BORDER_DENSITY = "WHITE"
TRIM = "YES"
REQ_IMG_SIZE = "SUPPORTED"
10BITS_STORED = "SUPPORTED"
]
```

Example section

Copy the above Example section here and then delete the comment marks (#).

(4) Enter “Printer1” for the printer AE name, in accordance with settings on the FN-PS side.

(5) Enter the underlined portions (“14IN × 17IN” and “BLACK”) on the keyboard.

Setup example

```
                   .
                   .
                   .
"Printer1" = [
MEDIUM_TYPE = "BLUE FILM"
FILM_DESTINATION = "PROCESSOR"
FILM_SIZE_ID = "14INX17IN"
MAG_TYPE = "CUBIC"
BORDER_DENSITY = "BLACK"
TRIM = "YES"
REQ_IMG_SIZE = "SUPPORTED"
10BITS_STORED = "SUPPORTED"
]
```

AE name: Enter “Printer1” here.

Enter setup items. Enter the underlined data directly on the keyboard.
For meanings of setup items, see the table below.

Item	Alternative	Setting	Note
Media type MEDIUM_TYPE=	**Blue film**	**"BLUE FILM"**	Default setting
	Clear film	"CLEAR FILM"	
	Paper	"PAPER"	
Destination of output film FILM_DESTINATION=	Magazine	"MAGAZIN"	
	Processor	**"PROCESSOR"**	For when the output destination is FN-PS.
	Printer tray	"BIN_i"	
Film size FILM_SIZE_ID=	8"×10"	"8INX10IN"	When the output destination is FN-PS, enter either "11INX14IN" or "14INX17IN".
	10"×12"	"10INX12IN"	
	?	"10INX14IN"	
	26×36cm	**"11INX14IN"**	
	14"×14"	"14INX14IN"	
	14"×17"	**"14INX17IN"**	
	?	"24CMX24CM"	
	24×30cm	"24CMX30CM"	
Image interpolation MAG_TYPE=	Replicate	"REPLICATE"	
	Bilinear	"BILINEAR"	
	Cubic	**"CUBIC"**	Default setting
	No interpolation	"NONE"	
Image smoothing SMOOTHING_TYPE=	Any character string	"Any character string"	This setting is effective only when the cubic system has been adopted for image interpolation. Be sure to describe for "Any character string" the character string defined in the Conformance Statement of the printer for film output destination. No settings are required if the film output destination is FN-PS.
Density outside the image frame BORDER_DENSITY=	Darker than the image	"BLACK"	Because priority has been given to the settings made via ID Terminal or Image Reader, this setting is effective only when density outside the frame is not specified during image reading.
	Whiter than the image	"WHITE"	
Trimming TRIM=	With trimming	"YES"	Default setting is "YES".
	Without trimming	"NO"	
Change of image output size REQ_IMG_SIZE=	Change	"SUPPORTED"	Sets whether or not to change the image output size. When "SUPPORTED" is selected, the image output size will be changed in accordance with settings made using the ImgSize.env file.
	Not change	"UNSUPPORTED"	
10-bit image output 10BITS_STORED=	Output	"SUPPORTED"	Basically set to "SUPPORTED".
	Not output	"UNSUPPORTED"	

(6) Save set items and close the file.

(7) To check whether the content of the DICOMPrint.env file thus set is correct or not, test film output according to the output conditions below.

Confirm that the following result can be obtained.

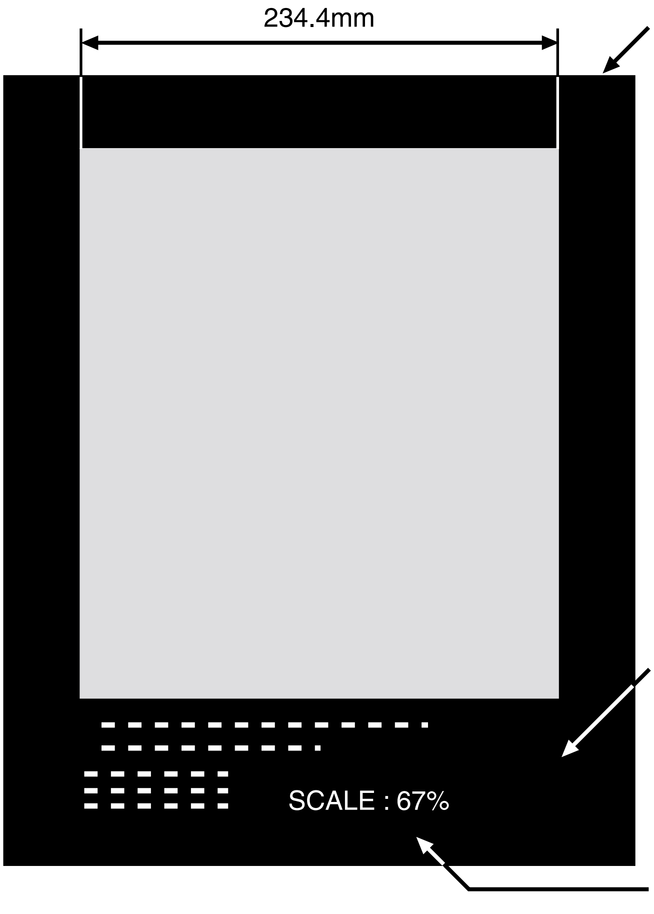
– Output conditions (specify the conditions using the application.) –

❍ Use the 14" × 17" vertical image.

❍ Use the standard density (ST) image.

❍ Output in 1on1 format.

– Output result –



14" × 17" film

Format no. 3 of film annotation characters (these characters will be output below the image area.)

67% image reduction ratio (234÷350=0.668)

This completes settings of the DICOMPrint.env file.

◆ Setup example 1 : Changing the image output size (Changing the ImgSize.env file - 1)

Described herein are procedures for changing the image area size on film (magnifying the output image size).
In the example shown below, width of the image to be output is changed from 234.4mm to 280.0mm.

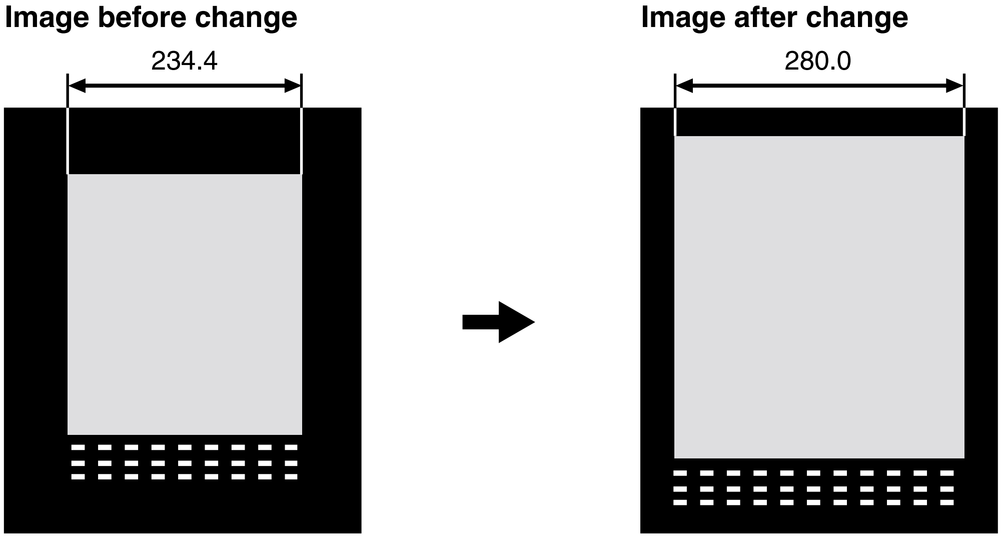
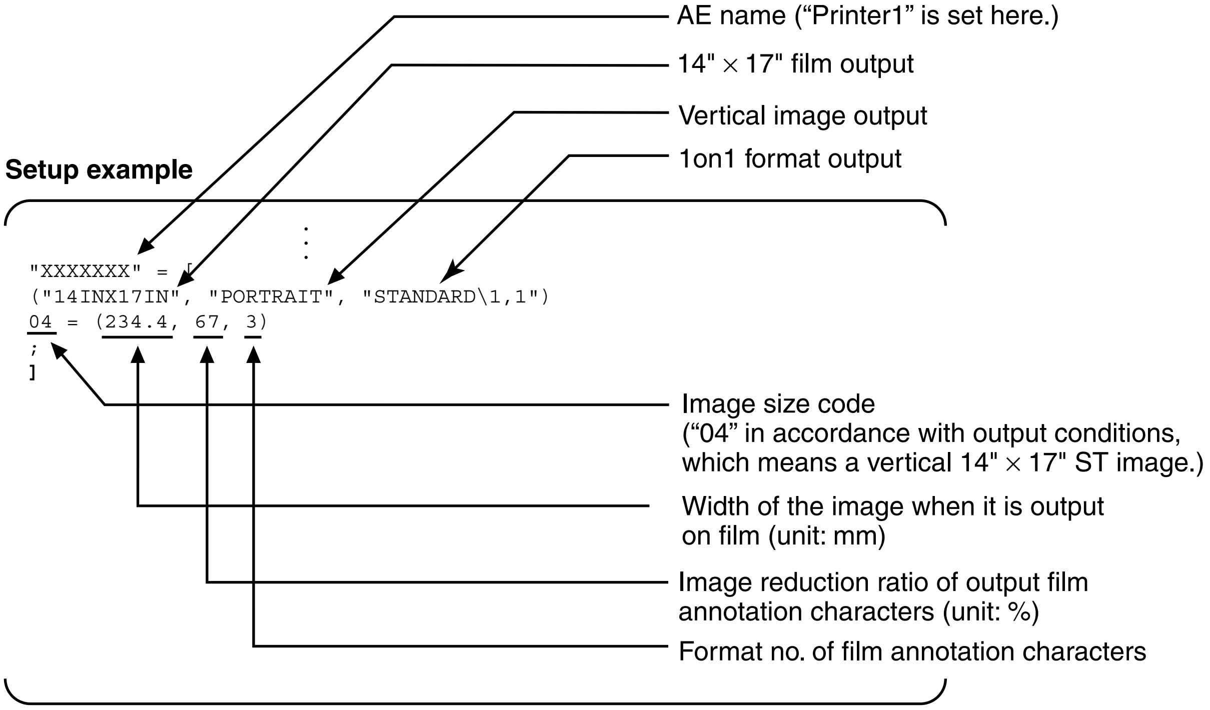


Image before change
234.4
Image after change
280.0

- **Output conditions**
  - 14" × 17" film is output.
  - Vertical 14" × 17" image is output.
  - Standard density (ST) image is used.
  - Image is output in 1on1 format.

- **Details of the file to be changed (ImgSize.env file)**

Setup example



```
                          :
"XXXXXXX" = [
("14INX17IN", "PORTRAIT", "STANDARD\1,1")
04 = (234.4, 67, 3)
;
]
```

AE name ("Printer1" is set here.)
14" × 17" film output
Vertical image output
1on1 format output
Image size code ("04" in accordance with output conditions, which means a vertical 14" × 17" ST image.)
Width of the image when it is output on film (unit: mm)
Image reduction ratio of output film annotation characters (unit: %)
Format no. of film annotation characters

● Setup procedures

(1) Display the Windows NT desktop screen.

(2) Activate the NotePad (memo) and open the “ImgSize.env” file stored in the “C:\Program Files\Hi-cx” directory.

(3) Copy the default settings section and delete unnecessary lines, as instructed below.
Be sure to copy the correct section.

```
# ImgSize.env
# DICOM Print Requested Image Size Configuration File
          :
          :
DEFAULT_SIZE=[
("11INX14IN", "LANDSCAPE", "STANDARD\1,1")
01 = (251.0, 100, 1)
          :
          :
;
("14INX17IN", "PORTRAIT", "STANDARD\1,1")
01 = , (200.0, 100, 1)
02 = (250.5, 100, 3)
03 = (234.4, 67, 3), (234.4, 67, 3)
04 = (234.4, 67, 3)
          :
          :
;
]
```

← Default settings section

```
DEFAULT_SIZE=[
("14INX17IN", "PORTRAIT", "STANDARD\1,1")
04 = (234.4, 67, 3)
;
]
```

← Copy the entire default settings section here and delete unnecessary lines.

(4) Enter the printer AE name.

(5) Modify each setup item as follows.

Setup example

```
          :
          :
"Printer1"=[
("14INX17IN", "PORTRAIT", "STANDARD\1,1")
04 = (280.0, 80, 3)
;
]         :
          :
```

AE name : Enter "Printer1" here, in accordance with settings on the FN-PS side.

Changes the width of the image (unit: mm) when it is output on film.
The width is changed to "280.0" allowing a full image width in relation to the 14" × 17"-size film width.

Changes the figure of image reduction ratio (unit: %) printed as film annotation characters. (The size of the image actually displayed will be the same even if this figure has been changed.)
The figure to be printed is changed to "80" in relation to the change made in image width.

Be sure to use the double quotations (“ ”) when entering the AE name.

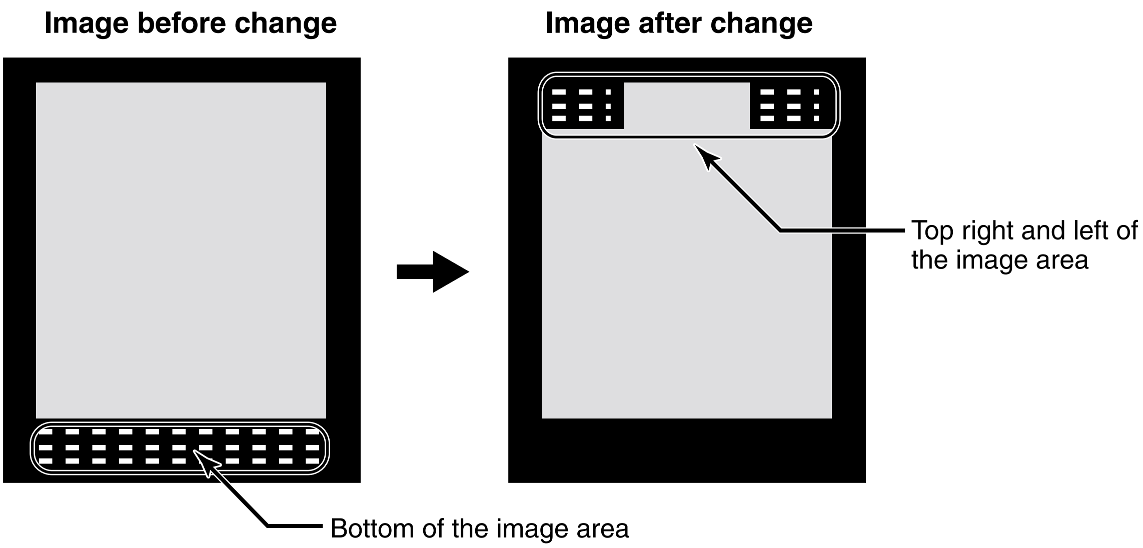
(6) Save changes and close the file.

To check the change result on output film, reactivate the PC.

This completes procedures for changing the image output size.

◆ Setup example 2 : Changing the format of film annotation characters (Changing the ImgSize.env file - 2)

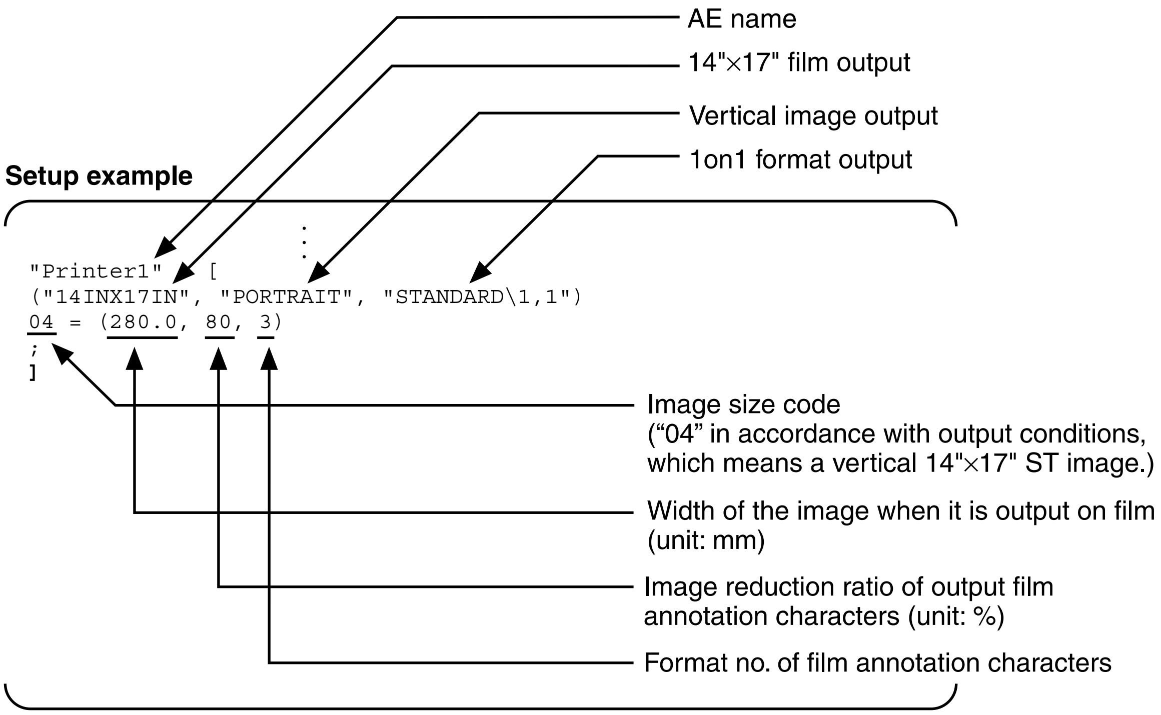
Described herein are procedures for changing the position where film annotation characters are output.
In the example shown below, the position is changed from the bottom to top right and left of the image area.



● Output conditions

- 14" × 17" film is output.
- Vertical 14" × 17" image is output.
- Standard density (ST) image is used.
- Image is output in 1on1 format.

● Details of the file to be changed (ImgSize.env file)


Setup example

```
                    ⋮
"Printer1"    [
("14INX17IN", "PORTRAIT", "STANDARD\1,1")
04 = (280.0, 80, 3)
;
]
```

AE name

14"×17" film output

Vertical image output

1on1 format output

Image size code
(“04” in accordance with output conditions, which means a vertical 14"×17" ST image.)

Width of the image when it is output on film (unit: mm)

Image reduction ratio of output film annotation characters (unit: %)

Format no. of film annotation characters

● Setup procedures

(1) Display the Windows NT desktop screen.

(2) Activate the NotePad (memo) and open the “ImgSize.env” file stored in the “C:\Program Files\Hi-cx” directory.

(3) Scroll the window to search for the “Printer1” AE name.

(4) Change the format no. of film annotation characters.

Setup example

```
           :
           :
"Printer1"=[
("14INX17IN", "PORTRAIT", "STANDARD\1,1")
04 = (280.0, 80, 4)
;
]          :
           :
```

Changes the format no. of film annotation characters. Enter “4” here to output film annotation characters on both right and left corners on top of the image.

(5) Save changes and close the file.

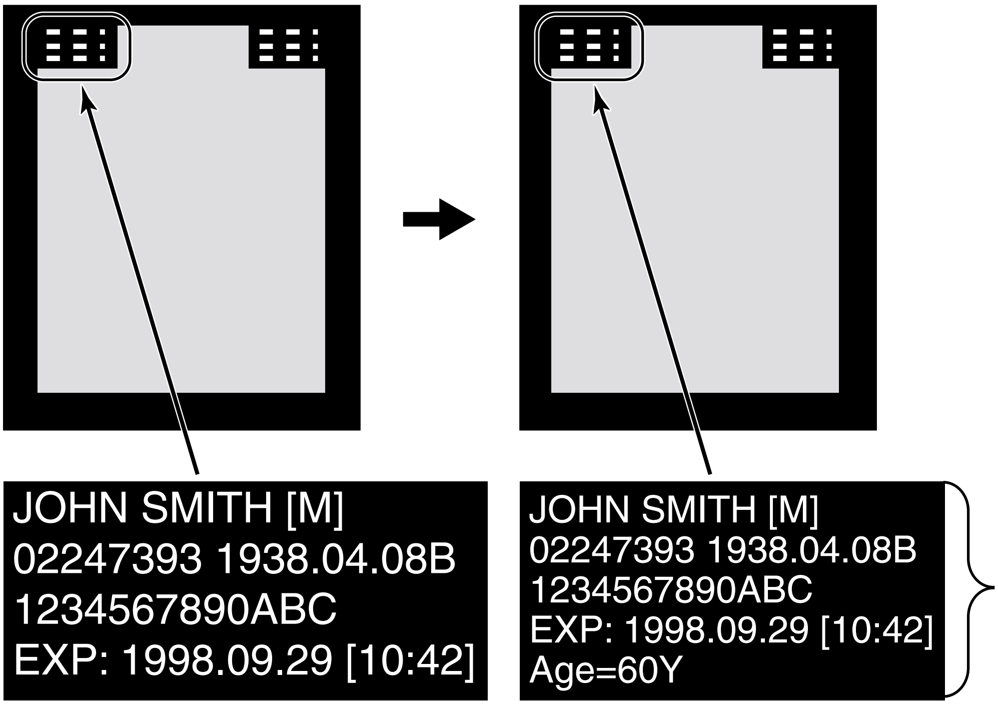
To check the change result on output film, reactivate the PC.

This completes procedures for changing the format of film annotation characters.

◆ Setup example 3 : Changing items and/or styles of film annotation characters (Changing the FilmStrFmt.env file)

Described herein are procedures for adding new items, such as age, etc., to film annotation characters and for changing character styles, such as font size, etc.
In the example shown below, the age is added to the line immediately after the line for date of birth, because format no. “4” of film annotation characters does not include the patient’s age.
For the purpose of this addition, the font size of the entire film annotation characters is reduced allowing space to include the patient’s age.

Image before change **Image after change**



JOHN SMITH [M]
02247393 1938.04.08B
1234567890ABC
EXP: 1998.09.29 [10:42]

JOHN SMITH [M]
02247393 1938.04.08B
1234567890ABC
EXP: 1998.09.29 [10:42]
Age=60Y

- The font size is reduced.
- The patient’s age is added at the bottom of film annotation characters.

● Output conditions

- 14" × 17" film is output.
- Vertical 14" × 17" image is output.
- Standard density (ST) image is used.
- Image is output in 1on1 format.

◆ Details of the file to be changed (FilmStrFmt.env file)

```
              :
FMT4_1 = [

  SetFilmPosition ( TL ) ;
  SetFontTypeFace ("Arial") ;
  SetFontSize (32) ;

  FilmStrings(" ", %*20s," [", %SEX2, "]"),(0010,0010),(0010,0040);
  FilmStrings(" ", %*15s," ",%DATE1,"B"),(0010,0020),(0010,0030);
  FilmStrings(" ",%*15s),(0008,0050);
  FilmStrings(" EXP:",%DATE1,"[",%TIME1,"]"),(0008,0020),(0008,0030);

]             :
```

Shows the font and size of film annotation characters.

Shows items to be output as film annotation characters.

Set film annotation characters that correspond to format no. “4” on the left corner on top of the image.

```
FMT4_2 = [

  SetFilmPosition ( TR ) ;
  SetFontTypeFace ("Arial") ;
  SetFontSize (32) ;

  FilmStrings($IMG_PROC);
  FilmStrings(%s," ",$EDR_MODE,%4s),(0018,1400),(0018,1401);
  FilmStrings($L,$S,$CS_SS);
  FilmStrings($FUNC_PROC, "  ", $FCR_ID);
  FilmStrings(%s, "   SCALE:",$MAG,"%"),(0019,2F91);
              :
]
```

Set film annotation characters that correspond to format no. “4” on the right corner on top of the image.

● Setup procedures

(1) Display the Windows NT desktop screen.

(2) Activate the NotePad (memo) and open the “FilmStrFmt.env” file stored in the “C:\Program Files\Hi-cx” directory.
Because the FilmStrFmt.env file text is based on the “Uni Code”, be sure to use the Windows NT NotePad for editing.

(3) Locate “FMT4_1” in the file.
“FMT4_1” includes setup description of film annotation characters that correspond to format no. “4” on the left corner on top of the image.

(4) Change setup items as follows.

Setup example

```
FMT4_1 = [

  SetFilmPosition ( TL ) ;
  SetFontTypeFace ("Arial") ;
  SetFontSize (28) ;

  FilmStrings(" ", %*20s," [", %SEX2, "]"),(0010,0010),(0010,0040);
  FilmStrings(" ", %*15s," ",%DATE1,"B"),(0010,0020),(0010,0030);
  FilmStrings(" ",%*15s),(0008,0050);
  FilmStrings(" EXP:",%DATE1,"[",%TIME1,"]"),(0008,0020),(0008,0030);
  FilmStrings(" Age=",%AGE2),(0010,0030);

]
```

Change the font size for allowing space to include the age. Change in this case to “28”.

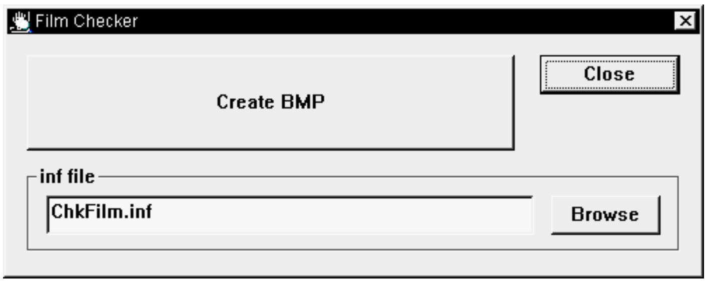
On the bottom, enter one format descriptor line that indicates the patient’s age.
In this case, add the underlined portion so that the age is output in “Age=XXY”.

(5) Save changes and close the file.

(6) It is possible to check to see whether the content of the set FilmStrFmt.env file is correct or not by creating the BMP of film annotation characters. Check it as required.

Activate the “C:\Program Files\Hi-cx\Checkfilm.exe” execution file of the film annotation characters check tool.

(7) Click [Create BMP].

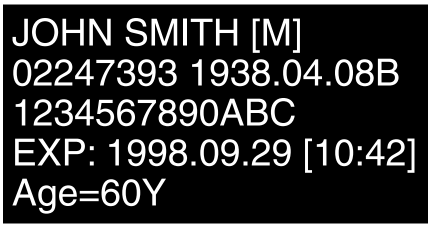


inf file: ChkFilm.inf

→ All image data (BMP file) of film annotation characters that have been set in the “FilmStrFmt.env” file will be created.
The BMP image thus created will be stored in the “C:\Program Files\Hi-cx” directory.

– Example of a BMP image –

(Film annotation characters of format no. 4 appearing on the top left of the image)



JOHN SMITH [M]
02247393 1938.04.08B
1234567890ABC
EXP: 1998.09.29 [10:42]
Age=60Y

To check the change result on output film, reactivate the PC.

This completes procedures for changing items and/or styles of film annotation characters.

2.2 Outputting Images on 26 × 36cm Film (11IN × 14IN)

◆ Setting the DICOMPrint.env File

(1) Display the Windows NT desktop screen.

(2) Activate the NotePad (memo) and open the “DICOMPrint.env” file stored in the “C:\Program Files\Hi-cx” directory.

(3) Copy the Example section in the file as follows and delete the comment marks (#).
Proceed to step (5) if the Example section has already been copied in “2.1 Outputting Images on 14” × 17” Film (14IN × 17IN).”

Setup example

```
# DEVICE# DICOMPrint.env
# DICOM Print Environment Configuration File
#
                    :
# Example
#
# "Printer AE Title" = [
# MEDIUM_TYPE = "BLUE FILM"
# FILM_DESTINATION = "PROCESSOR"
# FILM_SIZE_ID = "10INX12IN"
# MAG_TYPE = "CUBIC"
# BORDER_DENSITY = "WHITE"
# TRIM = "YES"
# REQ_IMG_SIZE = "SUPPORTED"
# 10BITS_STORED = "SUPPORTED"
# ]
#
"Printer AE Title" = [
MEDIUM_TYPE = "BLUE FILM"
FILM_DESTINATION = "PROCESSOR"
FILM_SIZE_ID = "10INX12IN"
MAG_TYPE = "CUBIC"
BORDER_DENSITY = "WHITE"
TRIM = "YES"
REQ_IMG_SIZE = "SUPPORTED"
10BITS_STORED = "SUPPORTED"
]
```

Example section

Copy the above Example section here and then delete the comment marks (#).

(4) Enter “Printer1” for the printer AE name, in accordance with settings on the FN-PS side.

(5) Enter the underlined portions (“11IN × 14IN” and “BLACK”) on the keyboard.

Setup example

```
                    :
"Printer1" = [
MEDIUM_TYPE = "BLUE FILM"
FILM_DESTINATION = "PROCESSOR"
FILM_SIZE_ID = "11INX14IN"
MAG_TYPE = "CUBIC"
BORDER_DENSITY = "BLACK"
TRIM = "YES"
REQ_IMG_SIZE = "SUPPORTED"
10BITS_STORED = "SUPPORTED"
]
```

AE name

Enter setup items. Enter the underlined data directly on the keyboard.
For meanings of setup items, see the table below.

Item	Alternative	Setting	Note
Media type MEDIUM_TYPE=	**Blue film**	**"BLUE FILM"**	Default setting
	Clear film	"CLEAR FILM"	
	Paper	"PAPER"	
Destination of output film FILM_DESTINATION=	Magazine	"MAGAZIN"	
	Processor	**"PROCESSOR"**	For when the output destination is FN-PS.
	Printer tray	"BIN_i"	
Film size FILM_SIZE_ID=	8"×10"	"8INX10IN"	When the output destination is FN-PS, enter either “11INX14IN” or “14INX17IN”.
	10"×12"	"10INX12IN"	
	?	"10INX14IN"	
	26×36cm	**"11INX14IN"**	
	14"×14"	"14INX14IN"	
	14"×17"	**"14INX17IN"**	
	?	"24CMX24CM"	
	24×30cm	"24CMX30CM"	
Image interpolation MAG_TYPE=	Replicate	"REPLICATE"	
	Bilinear	"BILINEAR"	
	Cubic	**"CUBIC"**	Default setting
	No interpolation	"NONE"	
Image smoothing SMOOTHING_TYPE=	Any character string	“Any character string”	This setting is effective only when the cubic system has been adopted for image interpolation. Be sure to describe for “Any character string” the character string defined in the Conformance Statement of the printer for film output destination. No settings are required if the film output destination is FN-PS.
Density outside the image frame BORDER_DENSITY=	Darker than the image	"BLACK"	Because priority has been given to the settings made via ID Terminal or Image Reader, this setting is effective only when density outside the frame is not specified during image reading.
	Whiter than the image	"WHITE"	
Trimming TRIM=	With trimming	"YES"	Default setting is "YES".
	Without trimming	"NO"	
Change of image output size REQ_IMG_SIZE=	Change	"SUPPORTED"	Sets whether or not to change the image output size. When “SUPPORTED” is selected, the image output size will be changed in accordance with settings made using the ImgSize.env file.
	Not change	"UNSUPPORTED"	
10-bit image output 10BITS_STORED=	Output	"SUPPORTED"	Basically set to “SUPPORTED”.
	Not output	"UNSUPPORTED"	

(6) Save set items and close the file.

(7) To check whether the content of the DICOMPrint.env file thus set is correct or not, test film output according to the output conditions below.

Confirm that the following result can be obtained.

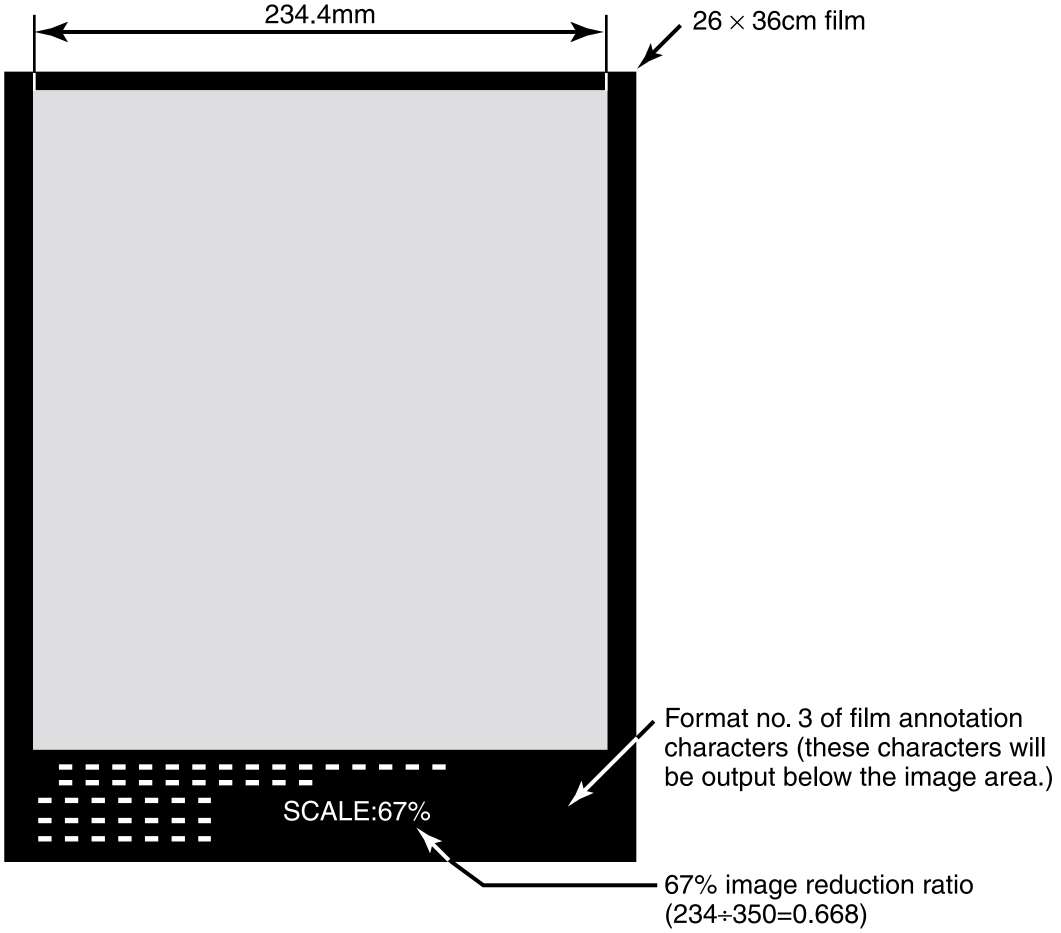
– Output conditions (specify the conditions using the application.) –

❍ Use the 14" × 17" vertical image.

❍ Use the standard density (ST) image.

❍ Output in 1on1 format.

– Output result –


234.4mm
26 × 36cm film
Format no. 3 of film annotation characters (these characters will be output below the image area.)
SCALE:67%
67% image reduction ratio (234÷350=0.668)

This completes settings of the DICOMPrint.env file.

◆ Setup example 1 : Changing the image output size (Changing the ImgSize.env file - 1)

Described herein are procedures for changing the image area size on film (reducing the output image size).
In the example shown below, width of the image to be output is changed from 234.4mm to 180.0mm.

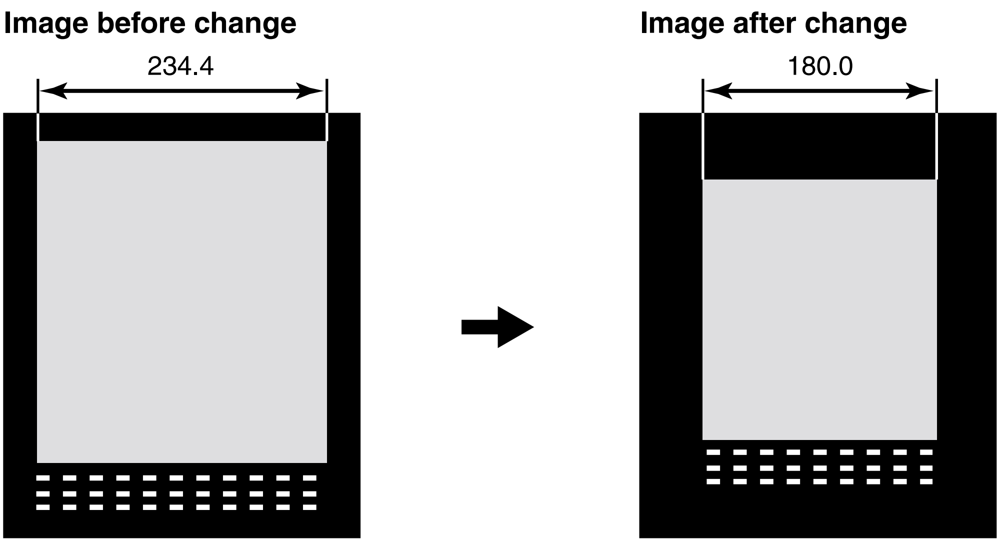
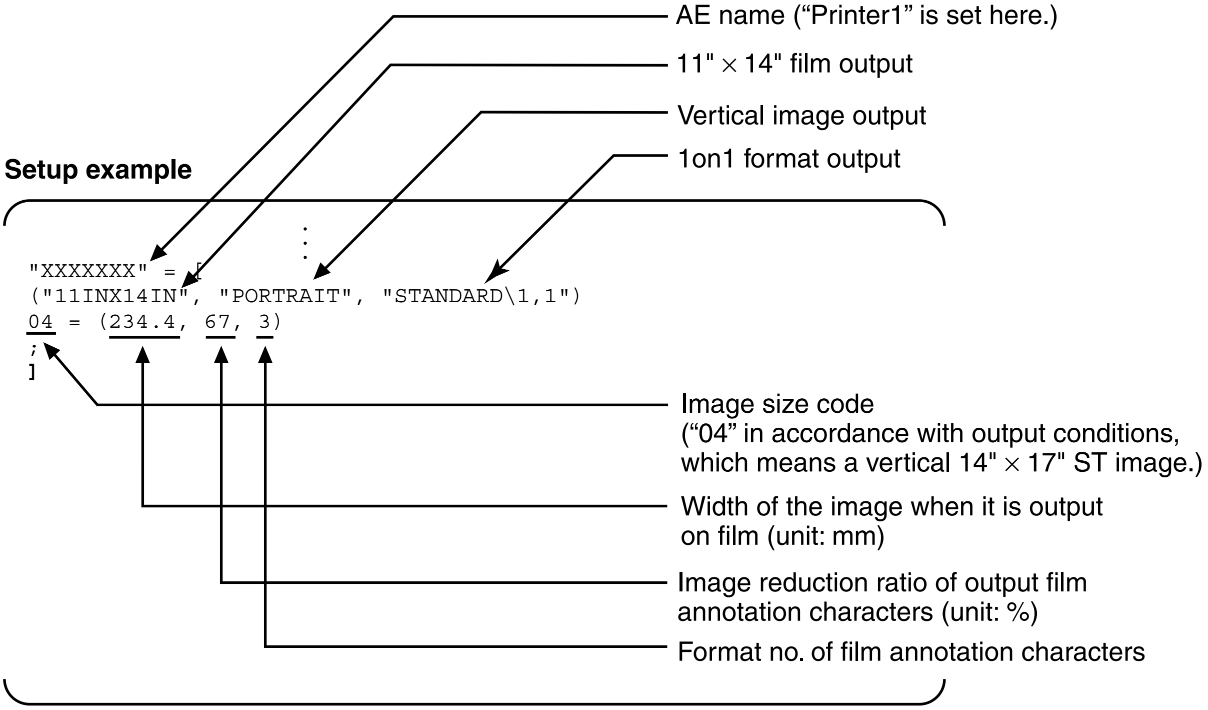


Image before change

Image after change

- **Output conditions**
  - 26 × 36cm (11” × 14”) film is output.
  - Vertical 14" × 17" image is output.
  - Standard density (ST) image is used.
  - Image is output in 1on1 format.

- **Details of the file to be changed (ImgSize.env file)**


Setup example

```
                      :
"XXXXXXX" = [
("11INX14IN", "PORTRAIT", "STANDARD\1,1")
04 = (234.4, 67, 3)
;
]
```

AE name (“Printer1” is set here.)

11" × 14" film output

Vertical image output

1on1 format output

Image size code
(“04” in accordance with output conditions, which means a vertical 14" × 17" ST image.)

Width of the image when it is output on film (unit: mm)

Image reduction ratio of output film annotation characters (unit: %)

Format no. of film annotation characters

● Setup procedures

(1) Display the Windows NT desktop screen.

(2) Activate the NotePad (memo) and open the "ImgSize.env" file stored in the "C:\Program Files\Hi-cx" directory.

(3) Copy the default settings section and delete unnecessary lines, as instructed below.
Be sure to copy the correct section.

```
# ImgSize.env
# DICOM Print Requested Image Size Configuration File
            :
DEFAULT_SIZE=[
("11INX14IN", "LANDSCAPE", "STANDARD\1,1")
01 = (251.0, 100, 1)
            :
;
("11INX14IN", "PORTRAIT", "STANDARD\1,1")
01 = , (200.0, 100, 1)
02 = (250.5, 100, 3)
03 = (234.4, 67, 3), (234.4, 67, 3)
04 = (234.4, 67, 3)
            :
;
]
```

← Default settings section

```
DEFAULT_SIZE=[
("11INX14IN", "PORTRAIT", "STANDARD\1,1")
04 = (234.4, 67, 3)
;
]
```

← Copy the entire default settings section here and delete unnecessary lines.

(4) Enter the printer AE name.

(5) Modify each setup item as follows.

Setup example

```
          :
"Printer1"=[
("11INX14IN", "PORTRAIT", "STANDARD\1,1")
04 = (180.0, 51, 3)
;
]         :
```

AE name : Enter "Printer1" here, in accordance with settings on the FN-PS side.

Changes the width of the image (unit: mm) when it is output on film.
The width is changed from "234.4" to "180.0".

Changes the figure of image reduction ratio (unit: %) printed as film annotation characters. (The size of the image actually displayed will be the same even if this figure has been changed.)
The figure to be printed is changed to "51" in relation to the change made in image width. (180÷350=0.51)

Be sure to use the double quotations (" ") when entering the AE name.

(6) Save changes and close the file.

To check the change result on output film, reactivate the PC.

This completes procedures for changing the image output size.

◆ Setup example 2 : Changing the format of film annotation characters (Changing the ImgSize.env file - 2)

Described herein are procedures for changing the position where film annotation characters are output.
In the example shown below, the position is changed from the bottom to top right and left of the image area.

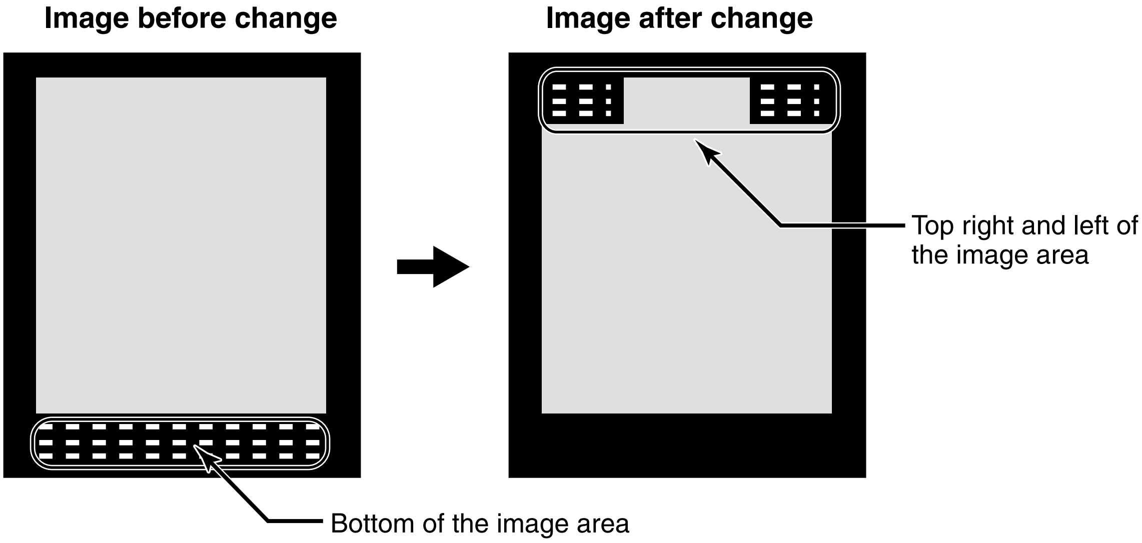
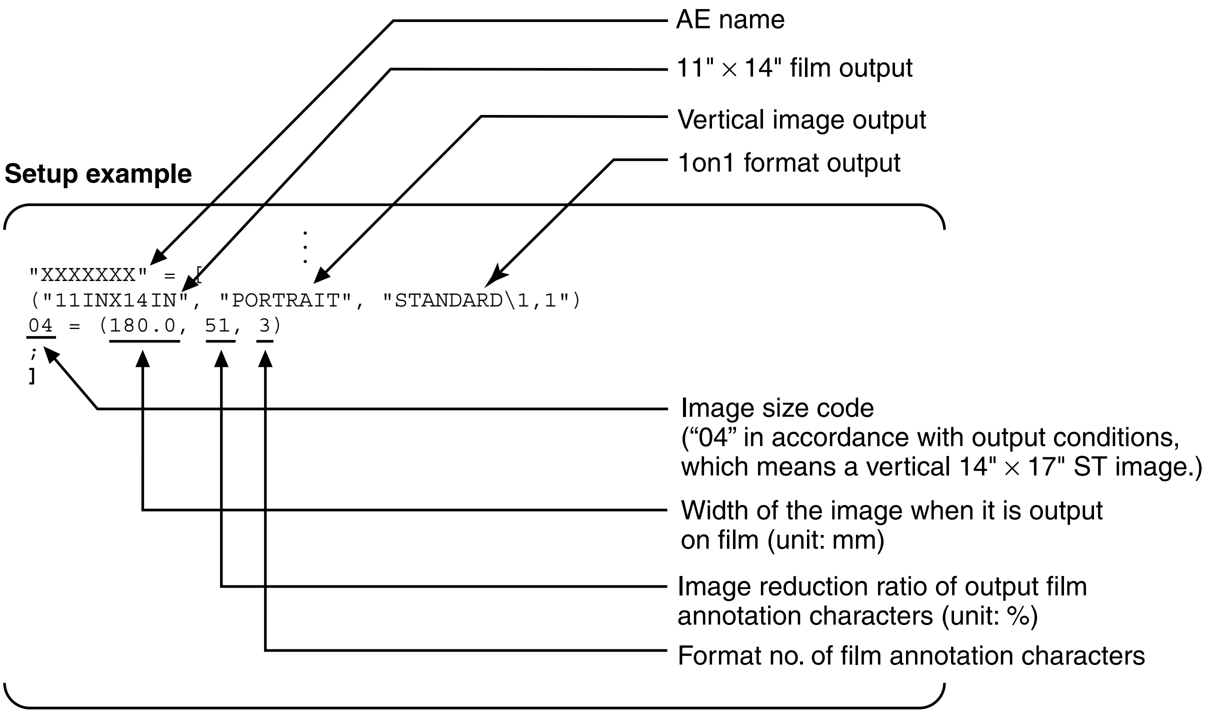


Image before change **Image after change**
Top right and left of
the image area
Bottom of the image area

● Output conditions

- 26 × 36cm (11” × 14”) film is output.
- Vertical 14" × 17" image is output.
- Standard density (ST) image is used.
- Image is output in 1on1 format.

● Details of the file to be changed (ImgSize.env file)


Setup example

```
        :
"XXXXXXX" = [
("11INX14IN", "PORTRAIT", "STANDARD\1,1")
04 = (180.0, 51, 3)
;
]
```

AE name
11" × 14" film output
Vertical image output
1on1 format output
Image size code
(“04” in accordance with output conditions, which means a vertical 14" × 17" ST image.)
Width of the image when it is output on film (unit: mm)
Image reduction ratio of output film annotation characters (unit: %)
Format no. of film annotation characters

● Setup procedures

(1) Display the Windows NT desktop screen.

(2) Activate the NotePad (memo) and open the “ImgSize.env” file stored in the “C:\Program Files\Hi-cx” directory.

(3) Scroll the window to search for the “Printer1” AE name.

(4) Change the format no. of film annotation characters.

Setup example

```
           ⋮
"Printer1"=[
("11INX14IN", "PORTRAIT", "STANDARD\1,1")
04 = (180.0, 51, 4)
;
]
           ⋮
```

Changes the format no. of film annotation characters.
Enter “4” here to output film annotation characters on both right and left corners on top of the image.

(5) Save changes and close the file.

To check the change result on output film, reactivate the PC.

This completes procedures for changing the format of film annotation characters.

◆ Setup example 3 : Changing items and/or styles of film annotation characters (Changing the FilmStrFmt.env file)

Described herein are procedures for adding new items, such as age, etc., to film annotation characters and for changing character styles, such as font size, etc.
In the example shown below, the age is added to the line immediately after the line for date of birth, because format no. “4” of film annotation characters does not include the patient’s age. For the purpose of this addition, the font size of the entire film annotation characters is reduced allowing space to include the patient’s age.

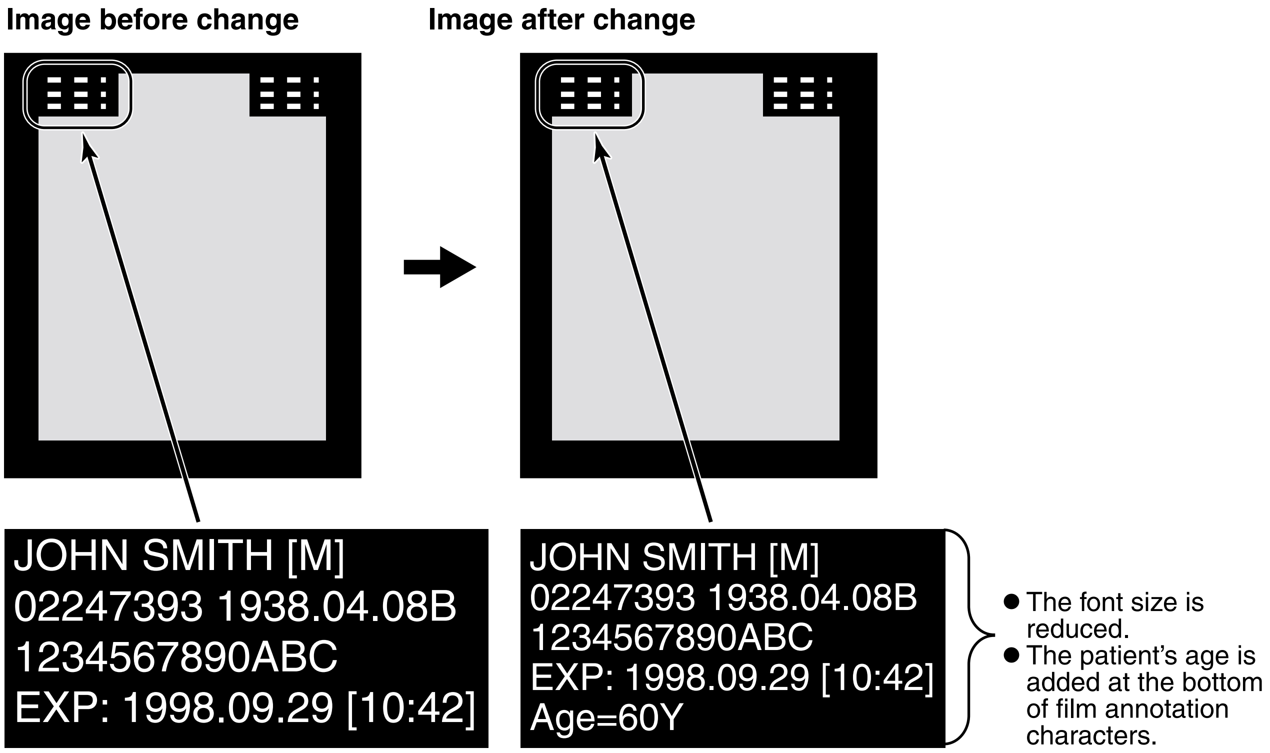


Image before change

Image after change

JOHN SMITH [M]
02247393 1938.04.08B
1234567890ABC
EXP: 1998.09.29 [10:42]

JOHN SMITH [M]
02247393 1938.04.08B
1234567890ABC
EXP: 1998.09.29 [10:42]
Age=60Y

- The font size is reduced.
- The patient’s age is added at the bottom of film annotation characters.

● Output conditions

- 26 × 36cm (11” × 14”) film is output.
- Vertical 14" × 17" image is output.
- Standard density (ST) image is used.
- Image is output in 1on1 format.

◆ Details of the file to be changed (FilmStrFmt.env file)

```
              :
FMT4_1 = [

  SetFilmPosition ( TL ) ;
  SetFontTypeFace ("Arial") ;
  SetFontSize (32) ;

  FilmStrings(" ", %*20s," [", %SEX2, "]"),(0010,0010),(0010,0040);
  FilmStrings(" ", %*15s," ",%DATE1,"B"),(0010,0020),(0010,0030);
  FilmStrings(" ",%*15s),(0008,0050);
  FilmStrings(" EXP:",%DATE1,"[",%TIME1,"]"),(0008,0020),(0008,0030);

]             :
```

Shows the font and size of film annotation characters.

Shows items to be output as film annotation characters.

Set film annotation characters that correspond to format no. “4” on the left corner on top of the image.

```
FMT4_2 = [

  SetFilmPosition ( TR ) ;
  SetFontTypeFace ("Arial") ;
  SetFontSize (32) ;

  FilmStrings($IMG_PROC);
  FilmStrings(%s," ",$EDR_MODE,%4s),(0018,1400),(0018,1401);
  FilmStrings($L,$S,$CS_SS);
  FilmStrings($FUNC_PROC, "  ", $FCR_ID);
  FilmStrings(%s, "   SCALE:",$MAG,"%"),(0019,2F91);
              :
]
```

Set film annotation characters that correspond to format no. “4” on the right corner on top of the image.

● Setup procedures

(1) Display the Windows NT desktop screen.

(2) Activate the NotePad (memo) and open the “FilmStrFmt.env” file stored in the “C:\Program Files\Hi-cx” directory.
Because the FilmStrFmt.env file text is based on the “Uni Code”, be sure to use the Windows NT NotePad for editing.

(3) Locate “FMT4_1” in the file.
“FMT4_1” includes setup description of film annotation characters that correspond to format no. “4” on the left corner on top of the image.

(4) Change setup items as follows.

Setup example

```
FMT4_1 = [

  SetFilmPosition ( TL ) ;
  SetFontTypeFace ("Arial") ;
  SetFontSize (28) ;

  FilmStrings(" ", %*20s," [", %SEX2, "]"),(0010,0010),(0010,0040);
  FilmStrings(" ", %*15s," ",%DATE1,"B"),(0010,0020),(0010,0030);
  FilmStrings(" ",%*15s),(0008,0050);
  FilmStrings(" EXP:",%DATE1,"[",%TIME1,"]"),(0008,0020),(0008,0030);
  FilmStrings(" Age=",%AGE2),(0010,0030);

]
```

Change the font size for allowing space to include the age. Change in this case to “28”.

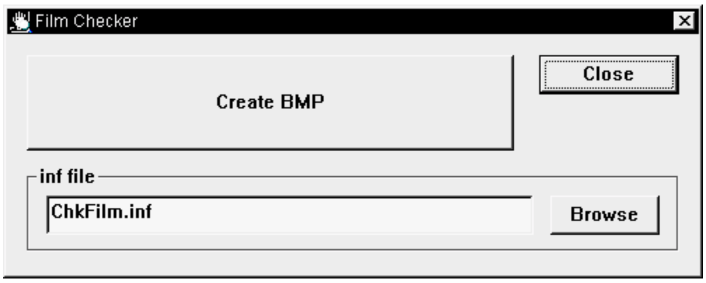
On the bottom, enter one format descriptor line that indicates the patient’s age.
In this case, add the underlined portion so that the age is output in “Age=XXY”.

(5) Save changes and close the file.

(6) It is possible to check to see whether the content of the set FilmStrFmt.env file is correct or not by creating the BMP of film annotation characters. Check it as required.

Activate the “C:\Program Files\Hi-cx\Checkfilm.exe” execution file of the film annotation characters check tool.

(7) Click [Create BMP].



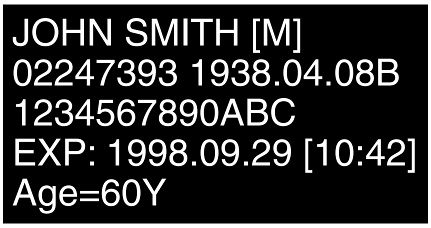
inf file

ChkFilm.inf

→ All image data (BMP file) of film annotation characters that have been set in the “FilmStrFmt.env” file will be created.
The BMP image thus created will be stored in the “C:\Program Files\Hi-cx” directory.

– Example of a BMP image –

(Film annotation characters of format no. 4 appearing on the top left of the image)



JOHN SMITH [M]
02247393 1938.04.08B
1234567890ABC
EXP: 1998.09.29 [10:42]
Age=60Y

To check the change result on output film, reactivate the PC.

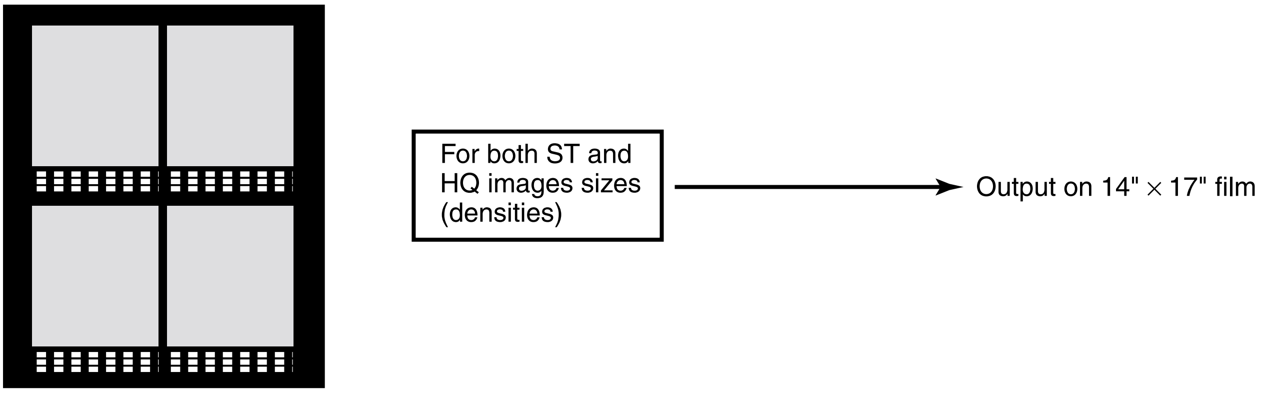
This completes procedures for changing items and/or styles of film annotation characters.

2.3 Using the SPEC_CR1 or SPEC_CR2 Setup (Software Version A03 or Later)

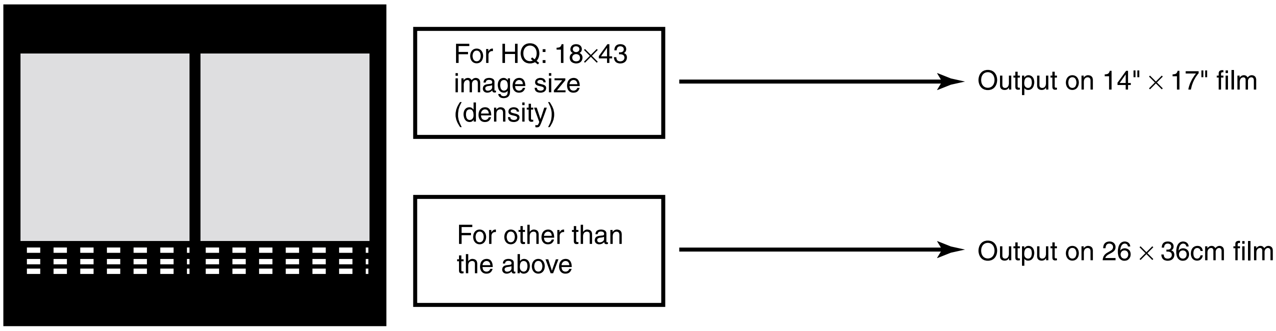
If SPEC_CR1 or SPEC_CR2 is set up in “FILM_SIZE_ID” of the DICOMPrint.env file, 14" × 17" or 26 × 36cm film will be selected automatically, making it possible to print images on the selected film.
Illustrated below is the logic for selecting each film size.

◆NOTE◆

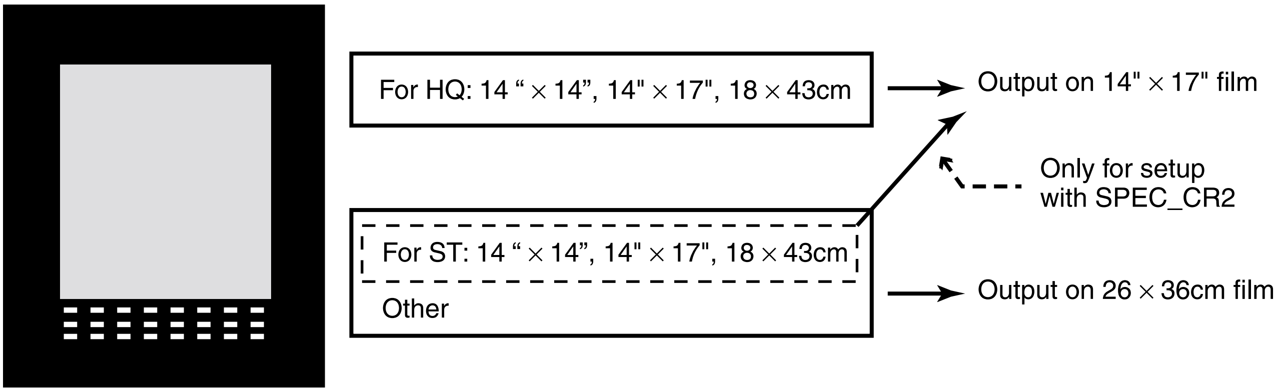
When setting up SPEC_CR1 or SPEC_CR2, use a printer that supports both 14" × 17" and 26 × 36cm films.


For both ST and HQ images sizes (densities)
Output on 14" × 17" film

For 4on1 output


For HQ: 18×43 image size (density)
Output on 14" × 17" film
For other than the above
Output on 26 × 36cm film

For 2on1 (AB or LR) output


For HQ: 14 “ × 14”, 14" × 17", 18 × 43cm
Output on 14" × 17" film
Only for setup with SPEC_CR2
For ST: 14 “ × 14”, 14" × 17", 18 × 43cm
Other
Output on 26 × 36cm film

For 1on1 output

ST : Standard density image
HQ : High quality image

Setup procedures

(1) Display the Windows NT desktop screen.

(2) Activate the NotePad (memo) and open the “DICOMPrint.env” file stored in the “C:\Program Files\Hi-cx” directory.

(3) Change setup items as follows.

Setup example

```
# DEVICE# DICOMPrint.env
# DICOM Print Environment Configuration File
#                    .
                     .
                     .
"Printer1" = [
MEDIUM_TYPE = "BLUE FILM"
FILM_DESTINATION = "PROCESSOR"
FILM_SIZE_ID = "SPEC_CR1"
MAG_TYPE = "CUBIC"
BORDER_DENSITY = "BLACK"
TRIM = "YES"
REQ_IMG_SIZE = "SUPPORTED"
10BITS_STORED = "SUPPORTED"
]
```

Change to “SPEC_CR1”.

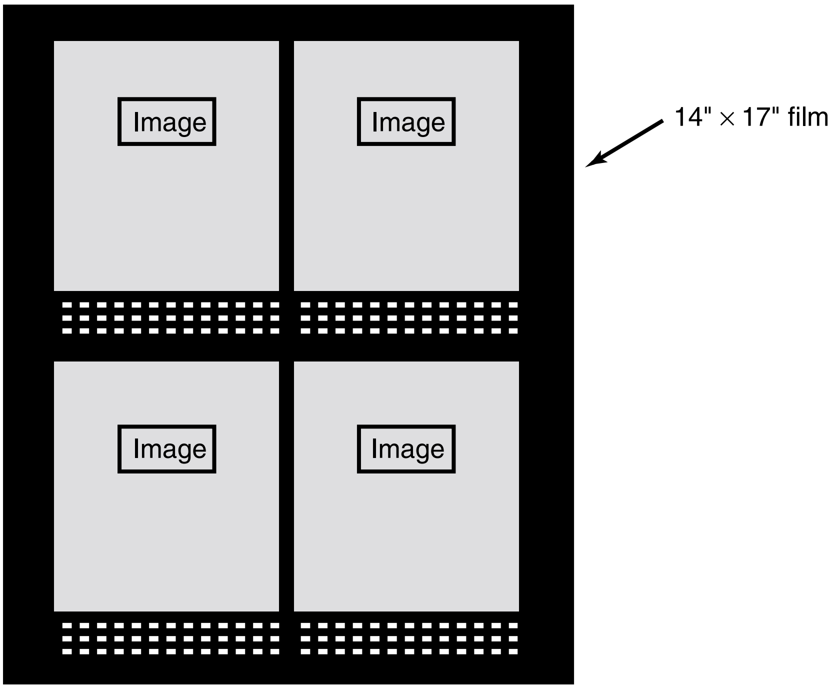
(4) Save changes and close the file.

(5) To check whether the content of the DICOMPrint.env file thus set is correct or not, test film output according to the output conditions below.
Confirm that the following result can be obtained.

-Output conditions (specify the conditions using the application.)-

❍ Output in 4on1 format (select the same sizes and densities for the four images).

-Output result-



This completes setup procedures with SPEC_CR1 or SPEC_CR2.

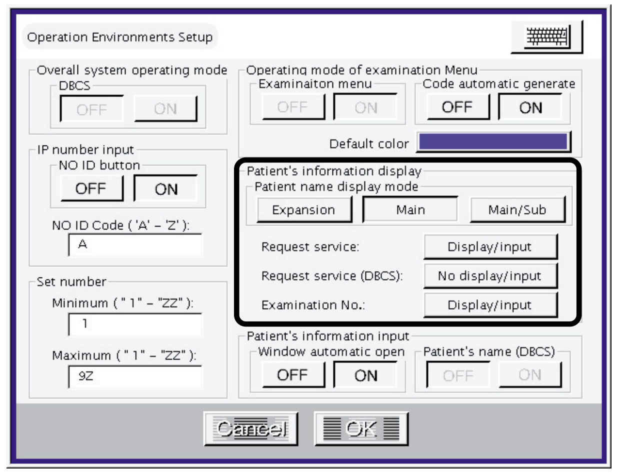
Study Instance UID Setup

ID-T741

■ Setup Windows

Maintenance process

├Operation Environments Setup



Operation Environments Setup

Overall system operating mode
DBCS

Operating mode of examination Menu
Examinaiton menu
Code automatic generate

Default color

IP number input
NO ID button

NO ID Code ('A' – 'Z'): A

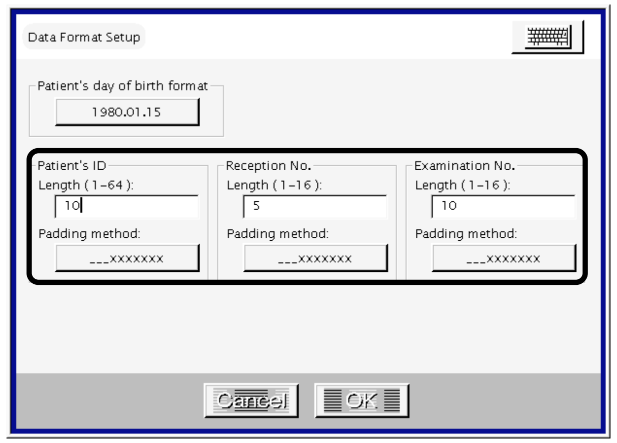
Patient's information display
Patient name display mode

Request service: Display/input
Request service (DBCS): No display/input
Examination No.: Display/input

Set number
Minimum ("1" – "ZZ"): 1
Maximum ("1" – "ZZ"): 9Z

Patient's information input
Window automatic open
Patient's name (DBCS)

├Data Format Setup



Data Format Setup

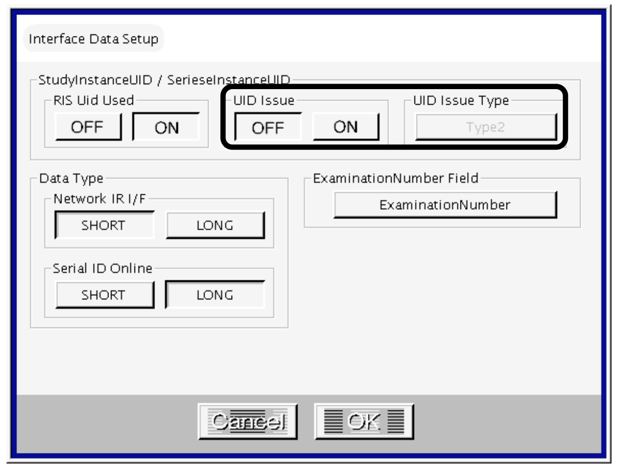
Patient's day of birth format: 1980.01.15

Patient's ID
Length (1–64): 10
Padding method: ___xxxxxxx

Reception No.
Length (1–16): 5
Padding method: ___xxxxxxx

Examination No.
Length (1–16): 10
Padding method: ___xxxxxxx

└Interface Data Setup



Interface Data Setup

StudyInstanceUID / SerieseInstanceUID
RIS Uid Used
UID Issue
UID Issue Type: Type2

Data Type
Network IR I/F
Serial ID Online

ExaminationNumber Field: ExaminationNumber

FCR5000

■ Setup Windows

MAINTENANCE UTILITY
└2.CONFIGURATION SETTING
　├1.SYSTEM

```
# IRSET.ORG/CFG
#
      ⋮
UID_STI = 3
#45.Study Instance UID Type
#  0:<org root>.2.0.<Private Image UID'>
#  1:<org root>.2.1.<Accesion Number'>
#  2:<org root>.2.2.<Study Date + Modarity(CR)>
#    .<Accesion Number'>
#  3:<org root>.2.3.<Study Date + Modarity(CR)>
#    .<Patient ID'>
      ⋮
```

　└6.NETWORK HOST INTERFACE

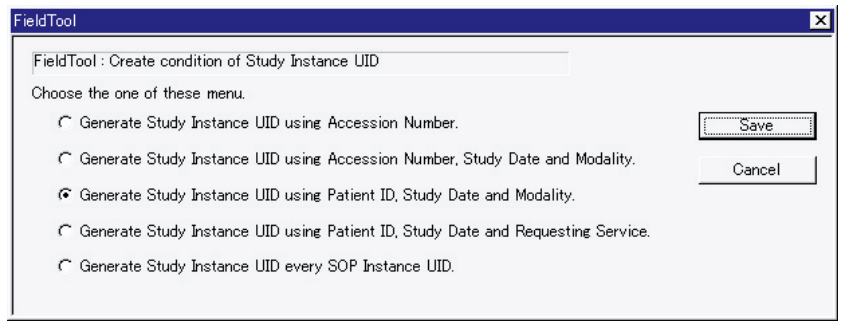
```
# DEVICE
#
      ⋮
qaws2:DISPLAY,0200,,
      ⋮
```

Protocol ID
0100:FINP
0200:Base on DICOM

QA-WS771

■ Setup Window

FieldTool : FMain Menu
└7.Appearance for routine usage
　└10.Study instance UID type



FieldTool

FieldTool : Create condition of Study Instance UID

Choose the one of these menu.

○ Generate Study Instance UID using Accession Number.
○ Generate Study Instance UID using Accession Number, Study Date and Modality.
● Generate Study Instance UID using Patient ID, Study Date and Modality.
○ Generate Study Instance UID using Patient ID, Study Date and Requesting Service.
○ Generate Study Instance UID every SOP Instance UID.

Appendix C

Study Instance UID Setup

ID-T741

Input Data

Patient ID:	04/17/2000_UID_Test01
Patient Name:	Instance_UID_Type4
Birth:	APR.17.1968
Exam#:	1234567890
Department Name:	UID_TEST

ID-T741	FCR5000	QA-WS771
Setup Example	**Setup Example**	**Study Instance UID, Setup Example**
• UID Issue: ON • UID Issue Type: Type4	• UID_STI: 3 • Protocol ID: Base on DICOM	• ● Generate Study Instance UID every SOP Instance UID. 1.2.392.200036.9125.2.0001232022016142.64293822167.4353002
• UID Issue: OFF	• UID_STI: 3 • Protocol ID: Base on DICOM	• ● Generate Study Instance UID every SOP Instance UID. 1.2.392.200036.9125.2.0.251136945.3623878848.755370627
• UID Issue: ON • UID Issue Type: Type3	• UID_STI: 3 • Protocol ID: Base on DICOM	• ● Generate Study Instance UID every SOP Instance UID. 1.2.392.200036.9125.2.0001232022016142.64293828693.4353002
• UID Issue: ON • UID Issue Type: Type4	• UID_STI: 3 • Protocol ID: Base on DICOM	• ● Generate Study Instance UID every SOP Instance UID. 1.2.392.200036.9125.2.0001232022016142.64293829421.4353002
• UID Issue: OFF	• UID_STI: 3 • Protocol ID: FINP	• ● Generate Study Instance UID every SOP Instance UID. 1.2.392.200036.9125.2.0.251136975.3992977600.755370627 1.2.392.200036.9125.2.0.251136979.3825205440.755370627 1.2.392.200036.9125.2.0.251136980.838860992.755370627 • ● Generate Study Instance UID using Patient ID, Study Date and Modality. 1.2.392.200036.9125.2.0.251136982.2097152192.755370627 1.2.392.200036.9125.2.0.251136983.738197696.755370627
• UID Issue: ON • UID Issue Type: Type4 • Department Name : Surgi#1	• UID_STI: 3 • Protocol ID: Base on DICOM	• ● Generate Study Instance UID using Patient ID, Study Date and Modality. 1.2.392.200036.9125.2.0001232022016142.64293833668.4353003 1.2.392.200036.9125.2.0001232022016142.64293833668.4353003
• UID Issue: ON • UID Issue Type: Type4 • Department Name : Surgi#2	• UID_STI: 3 • Protocol ID: Base on DICOM	• ● Generate Study Instance UID using Patient ID, Study Date and Modality. 1.2.392.200036.9125.2.0001232022016142.64293833866.4353004
• UID Issue: ON • UID Issue Type: Type4 • Department Name : Surgi#1	• UID_STI: 3 • Protocol ID: Base on DICOM	• ● Generate Study Instance UID using Patient ID, Study Date and Modality. 1.2.392.200036.9125.2.0001232022016142.64293833992.4353005 1.2.392.200036.9125.2.0001232022016142.64293833992.4353005

Appendix D Setup Necessary for Connection of SL-IC200

☞ For the SL-IC200 connection procedure, see the “LCD Monitor SL-IC200 Service Manual”.

When the LCD Monitor SL-IC200 is connected to the QA-WS, perform the following initial settings.

- Setting the monitor pixel size (FieldTool)
- Changing the display gradation correction table
- Rebuilding the database

● **Have the following ready for use.**

QA-WS A08 version software installation CD-ROM (abbreviated to “AP-CD”.)

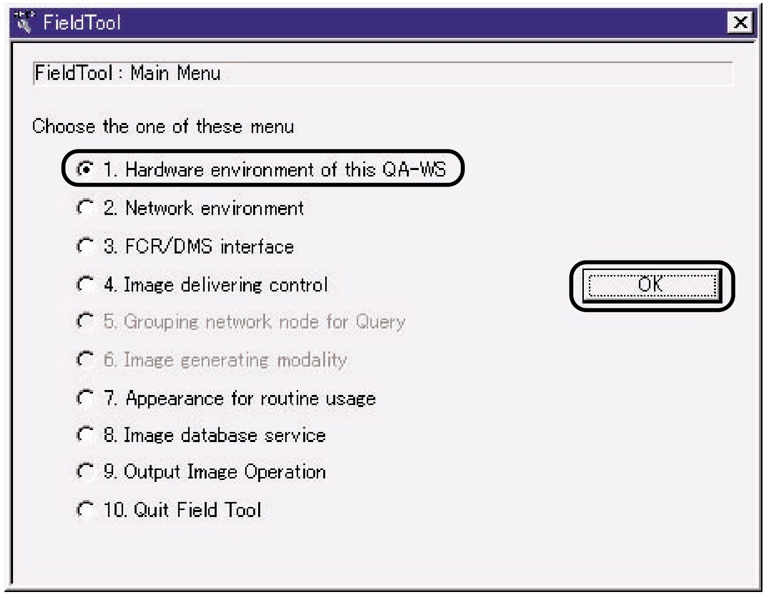
Described below is the procedure used for necessary settings.

■ Setting the monitor pixel size (FieldTool)

Determine the monitor pixel size in accordance with the SL-IC200 in use. The SL-IC200 pixel size is “0.255”.

1. **Start the FieldTool function.**

2. **Check to see that ● 1. Hardware environment of this QA-WS has been selected, and click OK.**



FieldTool

FieldTool : Main Menu

Choose the one of these menu

● 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
○ 8. Image database service
○ 9. Output Image Operation
○ 10. Quit Field Tool

OK

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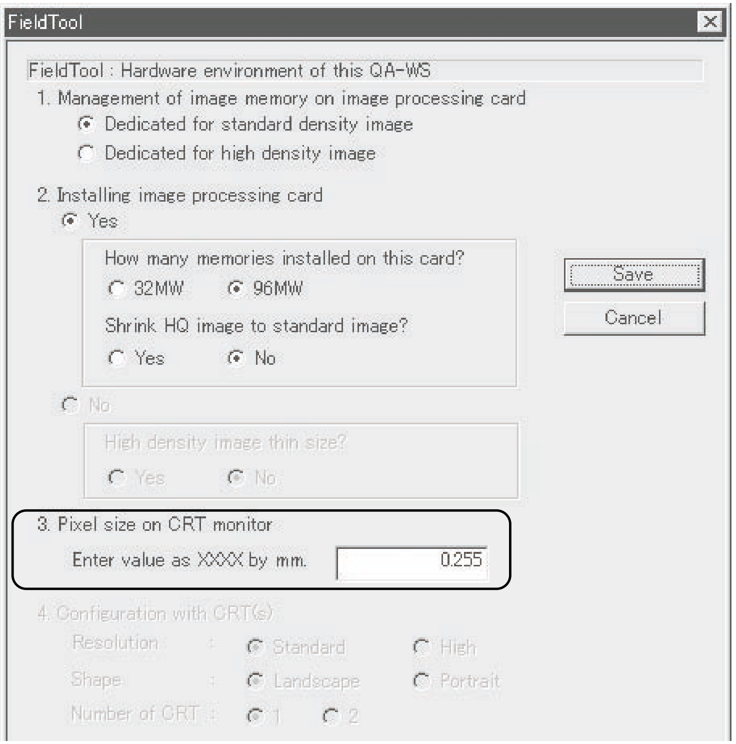
3. **Confirm the “3. Pixel size on CRT monitor” setting data. If it is different, change the data accordingly.**

“Pixel size on CRT monitor” : 0.255



FieldTool : Hardware environment of this QA-WS

1. Management of image memory on image processing card
   - ● Dedicated for standard density image
   - ○ Dedicated for high density image

2. Installing image processing card
   - ● Yes
     - How many memories installed on this card? ○ 32MW ● 96MW
     - Shrink HQ image to standard image? ○ Yes ● No
   - ○ No
     - High density image thin size? ○ Yes ● No

3. Pixel size on CRT monitor
   - Enter value as XXXX by mm. 0.255

4. Configuration with CRT(s)
   - Resolution : ● Standard ○ High
   - Shape : ● Landscape ○ Portrait
   - Number of CRT : ● 1 ○ 2

Note that settings in this area may differ depending on the equipment status.

Note that settings in this area may differ depending on the equipment status.

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4. **Click Save.**

➔ You are returned to the “FieldTool” window.

5. **Select ● 10. Quit Field Tool on the “FieldTool” window, and click OK.**

➔ The FieldTool Main Menu will shut down.

■ Changing the display gradation correction table

Copy the SL-IC200 display gradation correction table from the AP-CD to the QA-WS program folder.

1. **Insert the AP-CD into the CD-ROM drive.**

➔ The AP installer will start.

2. **Click “Cancel” to quit the installer.**

3. **Open the folder shown below from the AP-CD. “CD-ROM drive\setting\crtlut\SL-IC200”**

4. **Copy the “crtlut1.dat” and “crtlut2.dat” files included in the “SL-IC200” folder to the “C:\Program Files\HI_CX” folder.**

➔ A message appears asking if you wish to overwrite existing file.

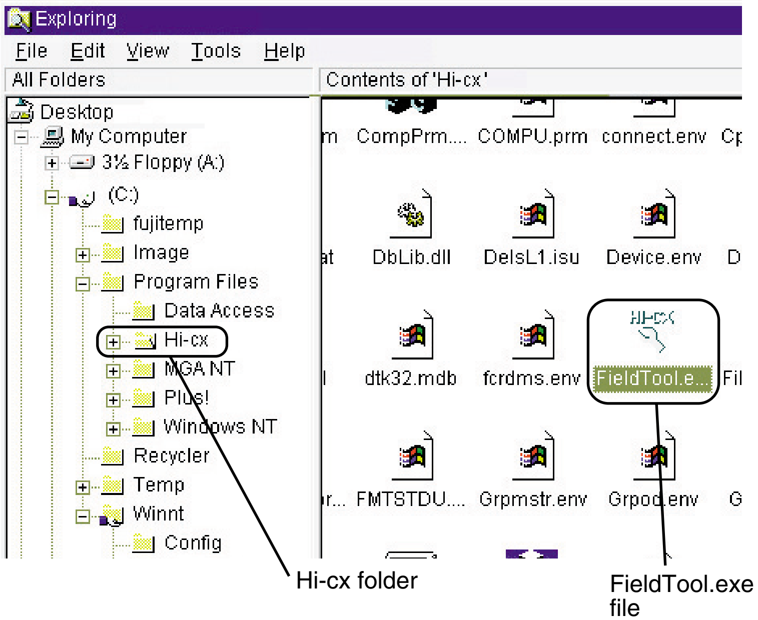
5. **Click “Yes”.**

■ Rebuilding the database

When the AP version has been upgraded, you have to rebuild the database.

1. **Open the “C:\Program Files\Hi-cx” folder.**

2. **Double-click FieldTool.e... .**


Exploring
File Edit View Tools Help
All Folders
Contents of 'Hi-cx'
Desktop
My Computer
3½ Floppy (A:)
(C:)
fujitemp
Image
Program Files
Data Access
Hi-cx
MGA NT
Plus!
Windows NT
Recycler
Temp
Winnt
Config
CompPrm....
COMPU.prm
connect.env
DbLib.dll
DelsL1.isu
Device.env
dtk32.mdb
fcrdms.env
FieldTool.e...
FMTSTDU....
Grpmstr.env
Grpod.env
Hi-cx folder
FieldTool.exe file

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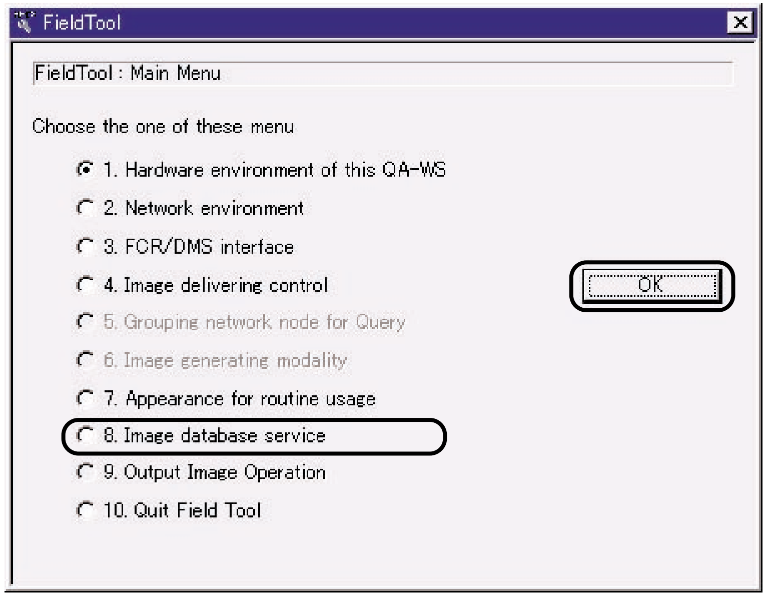
3. **Select ○ 8. Image database service, and click OK.**


FieldTool
OK

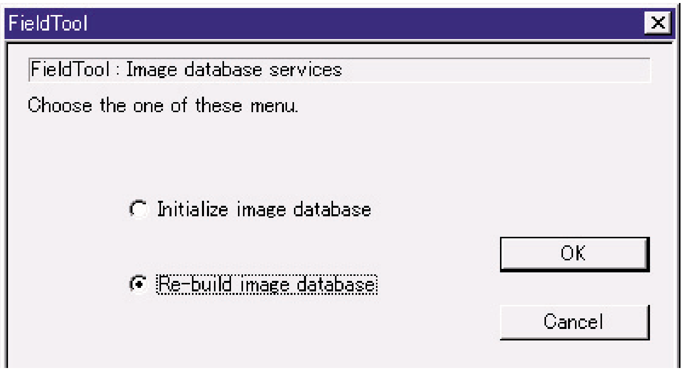
FieldTool : Main Menu

Choose the one of these menu

● 1. Hardware environment of this QA-WS
○ 2. Network environment
○ 3. FCR/DMS interface
○ 4. Image delivering control
○ 5. Grouping network node for Query
○ 6. Image generating modality
○ 7. Appearance for routine usage
○ 8. Image database service
○ 9. Output Image Operation
○ 10. Quit Field Tool

FR5H0215.EPS

4. **Select ● Re-build image database, and click OK.**


FieldTool
OK
Cancel

FieldTool : Image database services

Choose the one of these menu.

○ Initialize image database
● Re-build image database

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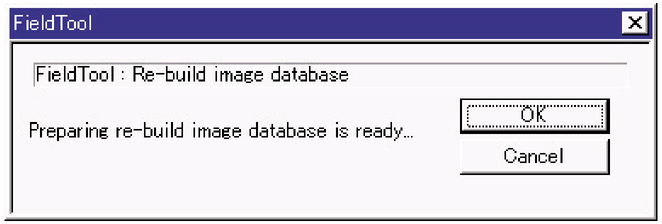
5. Click OK.



FieldTool

FieldTool : Re-build image database

Preparing re-build image database is ready...

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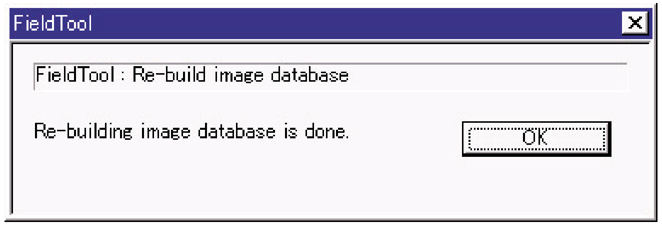
➔ The database will be rebuilt accordingly.

6. Click OK.



FieldTool

FieldTool : Re-build image database

Re-building image database is done.

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7. Click Cancel repeatedly several times.

➔ You are returned to the FieldTool Main Menu.

8. Select ○ 10. Quit Field Tool, and click OK.

➔ The FieldTool Main Menu will then shut down.

9. Restart the system.